

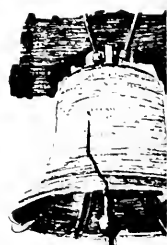
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# 1977

## *Clarion State College Catalog*



*Clarion, Pennsylvania*





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# CLARION STATE COLLEGE

CLARION, PENNSYLVANIA



CATALOG ISSUE

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MEMBER OF  
AMERICAN ASSOCIATION OF COLLEGES FOR  
TEACHER EDUCATION

MEMBER OF  
AMERICAN ASSOCIATION OF STATE  
COLLEGES AND UNIVERSITIES

APPROVED BY  
THE AMERICAN CHEMICAL SOCIETY

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AND SECONDARY SCHOOLS

ACCREDITED BY  
NATIONAL COUNCIL FOR ACCREDITATION OF  
TEACHER EDUCATION

CLARION STATE COLLEGE WELCOMES QUALIFIED STUDENTS,  
FACULTY, AND STAFF FROM ALL RACIAL, RELIGIOUS, ETHNIC,  
AND SOCIO-ECONOMIC BACKGROUNDS. CLARION STATE COL-  
LEGE IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EM-  
PLOYER.

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# CLARION STATE COLLEGE CALENDAR 1975-76

## SIX WEEK SESSIONS

|                       |                   |
|-----------------------|-------------------|
| First Session Begins  | Monday, June 2    |
| First Session Ends    | Friday, July 11   |
| Second Session Begins | Monday, July 14   |
| Second Session Ends   | Friday, August 22 |

## FIRST SEMESTER 1975-76

|  |                       |
|--|-----------------------|
| Registration — day and evening classes | Monday, August 25     |
| Classes Begin 8:00 A.M.                | Tuesday, August 26    |
| Labor Day Holiday                      | Monday, September 1   |
| Thanksgiving Recess Begins 5:50 P.M.   | Tuesday, November 25  |
| Thanksgiving Recess Ends 8:00 A.M.     | Monday, December 1    |
| Classes End 5:50 P.M.                  | Friday, December 12   |
| Final Examinations Begin 8:00 A.M.     | Saturday, December 13 |
| Semester Ends 12:00 Noon               | Saturday, December 20 |

## SECOND SEMESTER 1975-76

|  |                     |
|--|---------------------|
| Registration — day and evening classes | Monday, January 12  |
| Classes Begin 8:00 A.M.                | Tuesday, January 13 |
| Spring Recess Begins 5:50 P.M.         | Friday, March 12    |
| Spring Recess Ends 8:00 A.M.           | Monday, March 22    |
| Easter Recess Begins 5:50 P.M.         | Wednesday, April 14 |
| Easter Recess Ends 8:00 A.M.           | Tuesday, April 20   |
| Alumni Day                             | Saturday, May 1     |
| Classes End 10:00 P.M.                 | Thursday, May 6     |
| Reading Day                            | Friday, May 7       |
| Final Examinations Begin 8:00 A.M.     | Saturday, May 8     |
| Final Examinations End                 | Friday, May 14      |
| Commencement                           | Sunday, May 16      |
| Semester Ends                          | Monday, May 17      |

**CLARION STATE COLLEGE  
CALENDAR 1976-77**

**SUMMER SESSIONS — 1976**

**First Five-Week Session**

Session begins . . . . . Monday, June 7  
Session ends . . . . . Friday, July 9

**Second Five-Week Session**

Session begins . . . . . Monday, July 12  
Session ends . . . . . Friday, August 13

**FIRST SEMESTER 1976-77**

Registration for day & evening classes . . . Monday, August 23  
Classes begin 8:00 A.M. . . . . Tuesday, August 24  
Labor Day Holiday . . . . . Monday, September 6  
Thanksgiving Recess begins 5:50 P.M. Tuesday, November 23  
Thanksgiving Recess ends 8:00 A.M. . Monday, November 29  
Classes end 10:00 P.M. . . . . Thursday, December 9  
Reading Day . . . . . Friday, December 10  
Final Exams begin 8:00 A.M. . . . . Saturday, December 11  
Final Exams end 12:00 Noon . . . . . Friday, December 17  
Semester ends . . . . . Friday, December 17

**SECOND SEMESTER 1976-77**

Registration for day & evening classes . . Monday, January 17  
Classes begin 8:00 A.M. . . . . Tuesday, January 18  
Easter Recess begins 5:50 P.M. . . . . Tuesday, March 29  
Easter Recess ends 8:00 A.M. . . . . Monday, April 11  
Alumni Day . . . . . Saturday, May 7  
Classes end 10:00 P.M. . . . . Thursday, May 12  
Reading Day . . . . . Friday, May 13  
Final Exams begin 8:00 A.M. . . . . Saturday, May 14  
Final Exams end 12:00 Noon . . . . . Friday, May 20  
Commencement . . . . . Sunday, May 22  
Semester ends . . . . . Monday, May 23

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# THE CAMPUS AND FACILITIES

## MAIN CAMPUS

The main campus of Clarion State College occupies a tract of 55 acres. The Memorial Athletic Field provides a recreational area of 29 acres for athletic events. The College has acquired land north of Main Street adjacent to the present campus, and a master plan will integrate the development of the new campus with the old.

**BALLENTINE HALL**, located on Wood Street, houses 116 men. It was named for Professor John Ballentine who taught and served at times as Acting President between 1887 and 1920.

**BECHT HALL** now serves as faculty office space and is located on Wood Street. It was named for J. George Becht, President of the college from 1904 to 1912.

**BECKER RESEARCH-LEARNING CENTER** is located on Greenville Avenue and Thorn Street. It provides laboratories for research in educational methods and houses regional services and educational consultative assistance. It was named for C. Fred Becker, Professor of Education and Director of the Laboratory School, Teacher Training, and Placement between 1924 and 1948.

**CAMPBELL HALL** houses 450 students at the corner of Payne and Wilson Streets. It was named for Frank M. Campbell, Professor of Social Science from 1938 to 1972.

**CARLSON LIBRARY** is located on Wood Street. The library contains over 200,000 volumes and more than 2,500 periodical titles. The building was named for Rena M. Carlson, College Librarian from 1929 to 1963.

**CARRIER ADMINISTRATION BUILDING** at Main Street and Ninth Avenue houses offices for the President and his staff, the Vice President for Academic Affairs and his staff, the Registrar, and the Business Office. It was named after Carrier Seminary, direct ancestor of Clarion State College, which had been named for the Carrier family, early benefactors of the Seminary.

**CHANDLER DINING HALL** is located north of Wood Street, behind Ballentine Hall. The modern design provides four dining areas and four serving lines in an attractive setting for comfortable dining. It was named for Dr. Paul G. Chandler, President of the College from 1937 to 1960.

CHAPEL THEATRE is located at Wood Street and Eighth Avenue. The attractive stone building seats four hundred for lectures or public performances.

CLASSROOM BUILDING is being planned for the corner of Main Street and North Ninth Avenue to house the Division of Business Administration and the College Computer Center.

DAVIS HALL, located on Greenville Avenue, serves as the Audio Visual Closed Circuit Educational Television Center for the campus and contains radio and television studios as well as the classrooms and offices of the Division of Communication. It was named for A. J. Davis, President of the College from 1887 to 1902.

EGBERT HALL is located between the Harvey Student Union and the Carlson Library and provides administrative offices. It was named for Professor Walter R. Egbert, a teacher and Dean of Men of the College from 1887 to 1920.

FOUNDERS HALL is situated at the corner of Wood and Ninth and houses Business Administration classrooms, laboratories and offices. It was named for seven founders of the institution.

GIVEN HALL, situated on the hill behind Chandler Dining Hall, houses 250 students. It was named for Lorena M. Given, a teacher at the College from 1893 to 1919.

HARVEY HALL is located between Peirce Science and Chandler Dining Hall. It provides a snack bar, recreation space and lounge areas, and student activity offices. It was named for Frank Laird Harvey, a Trustee of the College from 1911 to 1932.

KEELING HEALTH SERVICES CENTER, at the corner of Wilson and Wood Streets, has modern clinical and infirmary facilities. It was named for Doctor Edward J. Keeling, who provided medical care for college students for some twenty-five years between 1939 and 1968.

MARWICK BOYD FINE ARTS CENTER, which stands at the south corner of Payne Street and Greenville Avenue, provides classrooms, studios, laboratories, offices, and exhibit areas for Art, Music, and Speech. The auditorium has a capacity of 1700 seats. A little theatre with seating for 250 utilizes the same stage. The Center was named for Miss Marie Marwick and Miss Margaret A. Boyd, teachers of English, speech, and drama between 1929 and 1956.

McENTIRE MAINTENANCE BUILDING on Wilson Avenue, south of Payne Street, was named for Bernard D. McEntire, former Superintendent of Buildings and Grounds. It houses offices, maintenance shops, Security, and the motor pool.

McKEEVER ENVIRONMENTAL LEARNING CENTER, located at Sandy Lake, Pennsylvania, is a facility consisting of eight buildings designed for the study of the environment. The campus consists of approximately 200 acres with three dormitories, an interpretive education building, dining hall, auditorium, maintenance building and director's residence.

MUSIC HALL, east of Carlson Library, is the residence of the president.

NAIR HALL provides housing for 450 students and is located on Main Street. It was named for Miss Bertha Nair, a faculty member in the Department of English for 38 years.

PEIRCE SCIENCE CENTER AND PLANETARIUM, located between Greenville Avenue and Chandler Dining Hall, provides modern classrooms, laboratories, and offices for Physical Science, Biological Science, and Geography, a 250 seat lecture hall, and a planetarium with a diameter of 40 feet. The Computer-Data Processing Center is on the ground floor. The building was named for Dr. Donald D. Peirce, teacher and Chairman of the Science Department between 1932 and 1968.

RALSTON HALL houses 200 students on the hill behind Chandler Dining Hall. It was named for Mrs. Amabel Lee Ralston, Dean of Women at the College from 1922 to 1930.

RIEMER COLLEGE CENTER is located at the north corner of Wilson Avenue and Payne Street. It offers an attractive lounge, snack bar, cafeteria, meeting rooms, and a multi-purpose area for dances, coffee house circuit, movies, informal programming, entertainment, etc. It was named for Dr. G. C. L. Riemer, President of the College from 1928 to 1937.

SPECIAL EDUCATION CENTER is located at the corner of Eighth and Greenville. It houses the Psycho-Educational Clinic and the Speech and Hearing Clinic, as well as the Language Laboratory and micro-teaching suites.

STEVENS HALL, attached to the Special Education Center on Greenville Avenue, provides college classroom and office space for professional and special education programs. It was named for Thaddeus Stevens, the father of the Pennsylvania Public School Law of 1834.

TIPPIN GYMNASIUM—NATATORIUM stands at the north corner of Payne and Greenville. It houses classrooms, offices, and gym areas for physical education, a 3,600 seat arena for varsity sports, and a natatorium with separate diving and swimming pools. It was named for Waldo S. Tippin, teacher, coach, and athletic director between 1935 and 1966.

WILKINSON HALL houses 450 students on the Main Street area of the campus. It was named for Dr. J.W. F. Wilkinson, Dean of Instruction between 1924 and 1935.

## **VENANGO CAMPUS**

Clarion State College operates an off-campus center in Oil City, Pennsylvania. Clarion's Venango Campus, now owned by the Commonwealth of Pennsylvania, is a tribute to the civic spirit of the people of the Oil City—Franklin area who supported and financed the venture. The Campus is located on a sixty-two acre wooded area on West First Street overlooking the Allegheny River.

Staffed with full-time faculty members of Clarion State College, Venango Campus offers students a convenient, inexpensive opportunity for two years of their college education. Courses at the branch campus are identical with those offered on main campus. In addition, Venango Campus now offers the curriculum leading to an Associate Degree of Science in Nursing.

VENANGO CLASSROOM BUILDING is an attractive, modern building containing classrooms, laboratories, library, recreational room, and college offices.

MONTGOMERY HALL, a privately owned residence hall located on the Venango Campus, provides housing for 105 women students and 105 men students. A dining hall is included in the building.

An Instructional Complex is under construction, scheduled to be open in January of 1976. This building will provide a gymnasium, theatre-lecture hall, snack bar, lounge and game room.

## **STUDENT AFFAIRS**

Clarion State College is concerned not only with the academic development of young men and women, but also with their development as mature, self-confident, socially competent

adults. To assist this development, various student personnel services are provided. These services enable those enrolled in the college to perform more adequately as students and to derive benefits from the academic, cultural, and social and recreational opportunities offered by the campus environment. In addition, every administrative and teaching member of the faculty is charged with the responsibility of assisting students to select and achieve goals consistent with the ideals of a college community.

## **STUDENT PERSONNEL SERVICES**

### **HOUSING SERVICES**

#### **College-Supervised Housing — Residence Halls**

Clarion State College considers student housing part of the overall educational experience of the student. The College Housing Policy, which appears in the Student Handbook, is reviewed annually in order to accommodate those students who can most benefit from College-supervised housing.

Within each residence hall, there is a cross-section of students representing most aspects of the highly divergent student body, and the student is exposed to living and working with all types of people. All housing assignments are made without regard to race, religion, color, ancestry, or national origin. Hall and roommate preferences stated on housing applications are given consideration in making assignments and are honored whenever possible.

The contract for assignment to residence halls is for an entire semester unless otherwise specified. The only grounds for an automatic release from the contract are withdrawal from college, graduation, or student teaching. Students who marry during the period of the contract are usually released upon request, but it cannot be guaranteed that these or any other requests for releases will be granted either in Commonwealth or privately-owned facilities.

Housing and food service fees are payable at the same time that other college fees become due. Refunds cannot be made unless the student withdraws from college for medical reasons properly certified by the attending physician.

A separate housing and food service application must be submitted for each year. All students returning to residence halls must submit a housing application card at the announced time. Housing information will be mailed to new students prior to registration. All housing application cards must be accompanied by a nonrefundable deposit.

Housing and food services are provided only on a combined basis for students living in the residence halls. Housing and food service contracts may not be transferred or assigned. The meal ticket may be used only by the student to whom it is issued, and a room may be occupied only by the student to whom it is assigned.

Student rooms in the residence halls are furnished with beds, desks, chairs, dressers, closets, and pillows. Students should plan to furnish blankets, linen, bed spreads, and small throw rugs. Radios and record players are permitted if they are operated with due consideration for others.

### **Off-Campus Housing**

Students not residing in College-supervised housing live in fraternity houses, rental facilities in the community, or their own homes. The Housing Office maintains a limited listing of available housing in the community. Householders listing available facilities must comply with all local, state, and federal regulations pertaining to rental units. Other sources of information are local newspapers and realtors.

All arrangements for housing in the community are a business arrangement between the student and householder. The College does not approve nor make recommendations to private, off-campus housing accommodations.

### **FOOD SERVICE**

Wholesome, well-balanced meals are provided in Chandler, Forest Manor, and Montgomery Dining Halls by reputable food service companies. All students living in residence halls are required to eat their meals in a dining hall. Students not living in residence halls may contract for their meals at Chandler Hall on a semester basis.

### **STUDENT DEVELOPMENT**

Clarion State College recognizes that there are applicants for admission whose success in college is jeopardized because of academic and/or cultural disadvantages. As a result of this recognition the College has established a program to assist students who may have problems of adjustment. This program is supervised by the Director of Educational Opportunity for Student Development. Students are identified for this program by an evaluation of high school achievement and SAT scores. The program provides for individual and group counseling, reading and study skills instruction, tutorial services, and close academic advisement.

## **STUDENT HEALTH INSURANCE**

In order to ease the financial burden which could result from serious or extended illness or injury, Clarion State College expects all students to participate in a group insurance plan negotiated by the College which covers the student wherever the illness or accident may occur. A waiver privilege will be extended to those students who have other insurance coverage equal or better than the coverage of the group plan offered.

## **COUNSELING SERVICE**

Counseling Center staff provide professional services related to developmental, educational, and vocational goals as well as to problems of personal, social, and emotional adjustment. The services of the Counseling Center are available without charge to all regularly enrolled Clarion State College students.

Most students request counseling on their own initiative. Some, however, need encouragement from others to seek counseling assistance. These students may be referred by instructors, academic advisers, residence hall staff, administrators, parents, or fellow students. Those seeking counseling services are not just the marginal or immature students; frequently the exceptionally able and conscientious students require the benefits of professional help in the counseling setting.

In keeping with accepted professional practice, counseling contacts with students are strictly confidential. No information is released to officers of the administration, faculty members, parents, graduate schools, governmental officials, or other outside agencies without the student's written authorization in advance. Rare exceptions to the above policy may occur when, in the counselor's professional opinion, there is a clear, immediate threat to the life or welfare of the student himself, to other students, or to the community at large.

For students who need psychiatric evaluation and/or therapy, the Counseling Center maintains a referral service with the Venango County Mental Health Center.

## **HEALTH SERVICE**

Recognizing that good physical and mental health is important to the educational process, the college provides for the protection and development of the health of its students. The Edward J. Keeling Health Services Center is located at the corner of Wood Street and Wilson Avenue and is staffed with resident nurses 24 hours per day, seven days per week.

College physicians maintain regularly scheduled office hours Monday through Friday. Additional visits to infirmary patients are made as required. When ill, students are expected to make every effort to visit the Health Center during regular clinic hours.

An infirmary is available to all full-time students requiring supervised care. Neither the college physicians nor nurses can make house calls, and only under emergency circumstances are calls made to a residence hall.

In any cases requiring transportation to a hospital, an ambulance will be used at the expense of the individual involved. Other related expenses, not covered by student insurance programs, are the responsibility of the student.

## **CAREER PLANNING AND PLACEMENT**

Counseling and guidance in career planning and placement are provided for all registrants. Students are encouraged to call personally at the office, especially in their earlier years of college, if they have any needs concerning career information.

The Career Planning and Placement Office assists all Clarion State College graduates in obtaining positions for which their college program has qualified them. Vacancy notices are received from public schools, government agencies, business, and industry, and are relayed to those who are registered with the Placement Service. Assistance is given college students and personnel officials in arranging for employment interviews. Placement credentials are prepared and distributed, upon request, to prospective employers to support the candidacy of registrants. Students' competence in their areas of specialization, their conduct, and their general demeanor are presented in a professional manner by the Career Planning and Placement Office for review by prospective employers. A listing of graduates, including their addresses, phone numbers, and areas of concentration, is prepared and mailed to prospective employers to facilitate the graduate in obtaining a position. Any student who does not wish his name on the list may have it removed upon request.

Career Planning and Placement is a free service. Graduates of former years are served, as well as current seniors, and all are urged to maintain their contacts with the Placement Service as a means of facilitating professional promotion.

All communications concerning career planning and placement should be sent to the Office of Career Planning and Placement.



## **PARKING AND AUTOMOBILE REGULATIONS**

All provisions of the Vehicle Code of the Commonwealth of Pennsylvania as supplemented by parking regulations issued by the Secretary of Education will be strictly enforced on the Clarion State College Campus. Authority for such enforcement rests with the Director of Law Enforcement and Safety. Persons failing to pay fines will be reported to the District Magistrate and upon conviction will be subject to penalties provided by law.

All persons who possess, maintain, or operate a motor vehicle on campus are required to register such vehicle with the Department of Law Enforcement and Safety. Registration must be completed during the academic registration period.

1. Persons qualifying for campus parking privileges will be issued a decal indicating that this privilege has been granted and will be assigned to a specific parking area.
2. Any person acquiring the use of a motor vehicle after the regular registration period who intends to operate the vehicle on campus must register the vehicle within twenty-four hours with the Office of the Director of Law Enforcement and Safety. Motor vehicles must be registered even when their use is intermittent rather than regular.

## **STUDENT ACTIVITIES**

Student activities of Clarion are viewed as another means of self-development. Therefore, the responsibility for the success of any activity or organization must rest with the students involved and ample opportunity exists for gaining experience in leadership and self-government.

## **STUDENT GOVERNMENT**

Through participation in student government, students have an opportunity to gain experience in democratic living and self-government. All students become members of the Clarion Students' Association upon their initial enrollment at Clarion and, thereby, are eligible to participate in the election of the Student Senate, the governing body of the Association. The Student Senate is responsible for expenditure of student activity fees through allocations to the various activities and organizations. The Senate has an important relationship to other Association operations such as the College Book Center and the Student Centers. It also appoints student representatives to various standing committees of the college.

Other opportunities for self-government are provided through the governing boards of the Association of Women Students, Panhellenic Council, Interfraternity Council, College Center Board, Inter-Hall Council, and residence hall councils.

The full utilization of this leadership is a very necessary element of success in any college or university and the maximum development of the leadership potential of each student must be considered an important part of the educational process. It is a well established fact that even though a college may have an excellent faculty and physical plant, it cannot attain true excellence unless it also has a capable and energetic student body able and willing to accept the responsibilities inherent in leadership.

## **ACTIVITIES PROGRAM**

The purpose of an extensive and varied activities program on campus is to make the College experience richer and more enjoyable. Clarion State is fortunate to have a wide variety of activities available for its students.

Many of the major cultural and social functions are sponsored by committees of the College Center Board from student activity funds allocated to it by Student Senate. Examples of such programs are Homecoming Weekend, Coffee House, campus movies, Miss CSC Pageant, pop concerts, dance and/or ballet groups and symphony orchestra appearances.

The Black Arts Festival, Distinguished Scholar Lecture series, intercollegiate athletics for both men and women, music recitals, and drama productions add further dimensions to the total activities program. Honoraries, clubs and special interest groups also sponsor speakers, dances, movies, luncheons and service projects on and off campus.

The many social events take place in the Riemer College Center, Harvey Hall, Chandler Dining Hall, the Chapel, or the Marwick-Boyd Auditorium, Harvey Hall, renovated in 1968, provides facilities for pocket billiards, small table games area, a lounge and TV poster shop, activities work room, the college newspaper and yearbook offices, the B.S.U. office, the campus radio station, a ground floor snack area, and offices of the Director of College Centers and the Coordinator of Student Activities. The new Riemer College Center, opened in the Spring of 1972, provides excellent facilities including a snack bar food service, dance and multi-purpose entertainment areas including a portable stage and audience-type seating, a lounge with TV and several conference rooms.

A list of the activities and organizations active on campus includes the following:

## ATHLETICS

Intramural Athletics  
Tennis Club  
Men's Intercollegiate Athletics  
Women's Intercollegiate Athletics

## MEDIA

Clarion Call (Newspaper)  
Dare (Literary Magazine)  
Sequelle (Yearbook)  
WCCB (Radio Station)

## PROFESSIONAL ORGANIZATIONS

Alpha Mu Gamma (Foreign Language Honorary)  
Alpha Psi Omega (Dramatics Honorary)  
Business Honorary  
Council for Exceptional Children (CEC)  
Gamma Theta Upsilon (Geography Honorary)  
Kappa Delta Pi (Education Honorary)  
Kappa Kappa Psi (Honorary Band Fraternity)  
Lambda Sigma (Library Science Honorary)  
Music Educators National Council (MENC)  
National Student Speech & Hearing Assn. (NSSHA)  
Penna. State Educational Assn. — Student Affiliate  
Pi Kappa Delta (Forensics Honorary)  
Pi Mu Epsilon (Math Honorary)  
Sigma Alpha Eta (Nat. Speech & Hearing Honorary)  
Sigma Tau Delta (English Fraternity)  
Tau Beta Sigma (Honorary Band Sorority)

## SPECIAL INTEREST GROUPS AND ACTIVITIES

Accounting Club  
Afro-American Drum and Dance Troupe  
American Chemical Society — Student Affiliate  
Archaeological Association  
Bios Club  
Black Student Ministry  
Black Student Union (B. S. U. )  
Brass Choir  
Business Association  
Campus Crusade for Christ  
Campus Ministry  
Cheerleaders  
Chess Club  
Clarion Geographical Society

Clarion International Association (C. I. A.)  
Classical Guitar Society  
College Community Orchestra  
College Players  
College Readers  
Collegiate Rainbow Girls  
Concert Choir  
Dance Ensemble  
Debate Team  
English Club  
Geographical Society  
German Club  
Gospeliers  
History Club  
Lab Jazz Band  
Lyric Opera Workshop  
Madrigal Singers  
Marketing Association  
Marching Band  
Math Club  
Pre-Med Club  
Psychology Club  
Recycling Center  
Russian Club  
Ski Club  
Spanish Club  
String Orchestra  
Student Alumni Association  
Student Experimental Television (SET)  
Student Information Center  
Symphonic Band  
Tennis Club  
Varsity "C" Club  
Veteran's Club  
Woodwind Choir  
Women's Athletic Association (WAA)

## STUDENT GOVERNMENT

Association of Women Students  
Clarion Students Association  
College Center Board  
Interfraternity Council  
Interhall Council  
Panhellenic Council  
Student Senate

## ATHLETIC PROGRAM

INTERCOLLEGIATE ATHLETIC competition plays an important role in the lives of Clarion State College students. Clarion State College is affiliated with both the National Collegiate Athletic Association and the National Association of Intercollegiate Athletics. The present athletic program for men includes varsity and freshman teams in football, basketball, baseball, wrestling, riflery, golf, track, swimming, and cross country. Plans are developing to add gymnastics and soccer to the existing program.

The Women's Intercollegiate Athletic Activities include basketball, gymnastics, speed swimming, synchronized swimming, and volleyball. This program is under the jurisdiction of the Division of Girls' and Women's Sports, American Association of Health, Physical Education, and Recreation.

Facilities for intercollegiate athletics include the Memorial Stadium dedicated in 1965 and the Waldo S. Tippin Gymnasium-Natatorium dedicated in 1968. The stadium will seat approximately five thousand spectators for football and track, and has dressing rooms for varsity and freshman teams in football, baseball, and track, with separate visiting team dressing, shower, and locker rooms. The football field is surrounded by an all-weather track. The facility also includes a baseball diamond and field, practice football fields, and parking areas for several hundred cars. The new Gymnasium-Natatorium, seating approximately four thousand spectators, provides year-round physical education and athletic activities and services.

INTRAMURAL ATHLETICS are provided for men and women students by funds from student activity fees allocated by the Student Senate. The program is planned and supervised by the Department of Health, Physical Education and Recreation. Intramural competition is provided in touch football, soccer, volleyball, squash, handball, chess, bowling, table tennis, basketball, bridge, "500," wrestling, badminton, archery, billiards, swimming, softball, track and field, water basketball, golf, paddleball, and other areas where interest is sufficient.

VARSITY "C" CLUB. The Varsity "C" Club is made up of men of the College who have earned the "C" in one of the intercollegiate sports. Awards presented to all members are provided by the club. The objectives of this club are to aid in

the maintenance of pleasant relationships with other colleges and in the promotion of a high standard of conduct by members of the athletic teams.

## **MUSIC PROGRAM**

**CLARION STATE COLLEGE CONCERT CHOIR.** Membership in the Concert Choir is by audition only. Auditions are held at the beginning of each semester, and membership is open to any student who can satisfactorily pass the audition examination. The Concert Choir has a long and distinguished history as a performing group.

**THE MADRIGAL SINGERS** is a highly select group made up of advanced students who possess the technique and voice which are vital to this specialized area of music. This group is a flexible one and varies in number from twelve to sixteen voices, depending upon the compositions to be performed. The literature presented by the Madrigal Singers represents some of the finest music ever written for voice.

**THE LABORATORY JAZZ BAND.** Comprehensive study of various schools and styles of jazz through performance, utilizing a jazz ensemble of approximately twenty-five instrumentalists selected on the basis of playing ability. Performance literature includes representative works for large jazz band ranging from styles of the 1930's to the present, with emphasis on recent trends in composition and arranging. The Laboratory Jazz Band presents two formal concerts each year on the college campus and performs for high school and community audiences in tours throughout Western Pennsylvania.

**MARCHING BAND.** Ranked as one of the finest college bands in Pennsylvania, the Clarion State College Marching Golden Eagles has continued its traditionally outstanding musicianship and marching finesse as the membership has increased.

The ideals of the band are geared first to develop musicianship and marching precision; second, to inspire and encourage academic achievement; third, to develop character; and fourth, to develop outstanding leadership ability.

**SYMPHONIC BAND.** The Clarion State College Symphonic band is a skilled ensemble of ninety wind and percussion players. Membership is dependent upon the outcome of the audition and particular instrumental needs.

Purposes of the Symphonic Band are to perform literature of the highest aesthetic value, with an emphasis on original works

for band; to attain perfection in performance ability through rigid requirements for individual musicianship and advanced playing technique; and to provide a means for artistic expression through participation in a distinctive medium of musical expression.

The repertoire of the band is selected from all periods and styles of composition and is designed to meet a variety of program responsibilities.

The Symphonic Band is featured in two major concerts each year and an Annual Spring Tour. Guest artists and clinicians appearing with the band in recent years include Rafael Mendez, Bob Lowry, Warren Covington, James Burke, Frank Arsenault, Roy Burns, James W. Dunlop, William Bell, and Warren Mercer.

THE BRASS CHOIR is a highly specialized organization offering outstanding students an opportunity to study and perform chamber music for brass. The repertoire is varied with a concentration on early music and music of the twentieth century. Exactitude of intonation, rhythmic precision, phrasing, and proper methods of attack are stressed. The number of students in the Brass Choir will vary somewhat from semester to semester depending upon the instrumentation of the compositions to be performed. Participation is available by audition only.

THE CLARINET CHOIR is a performing organization specializing in chamber music specifically arranged for the entire clarinet family. Literature for this group encompasses compositions from different historical periods. The stress in this group is on performance and consequently intonation, rhythmic precision and dynamics. Furthermore, it furnishes the students with an opportunity not only to perform as regular members but also to participate as soloists and conductors in order to prepare them for public school music education. Any clarinetist interested in the clarinet choir may participate, provided he or she has passed the audition for admission to this group.

WOODWIND CHOIR consists of all woodwind instruments regularly found in the concert band. The purpose of this organization is to perform chamber music, especially arranged for this medium. Students who have had considerable playing experience on the woodwinds (majors and non majors) may join this organization. No auditions necessary.

BRASS, PERCUSSION, WOODWIND AND STRING ENSEMBLES are organized when the talent and instrumentation are available. Membership in these groups is voluntary.

TAU BETA SIGMA is a National Honorary Band Sorority on the Clarion Campus which received its charter in May of 1970. Membership is open to all women in the college band who have completed one semester of active participation in the band program and who have successfully completed a pledge period. The sorority is dedicated to the ideals of promoting musicianship, leadership, citizenship, and service.

THE CLARION STATE COLLEGE OPERA WORKSHOP is open to all students who are interested in becoming acquainted with great works in lyric drama and musical comedy and the problems involved in producing these works. Short scenes, as well as complete works, are produced in the fall and spring semesters and during the summer. Dancers, singers, actors, and production personnel are invited to participate.

THE CLARION STATE COLLEGE—COMMUNITY ORCHESTRA consists of students, faculty, and selected laymen of the area. The orchestra traditionally presents concerts each year which include not only the standard literature for orchestra but also the performance of concertos with students and faculty as soloists. Other playing opportunities are provided on occasion to perform with the choir, opera workshop, and the all-college musical. Membership is open to all in consultation with the conductor.

## **PUBLICATIONS PROGRAM**

THE CLARION CALL is the weekly college newspaper. Published by the Clarion Students' Association, it follows regular newspaper style and format. Staff participation is essential for students with an interest in entering the field of journalism or publications advisement. Prior experience in journalism is helpful but certainly not necessary for success. Certain editorial and business positions receive financial remuneration.

DARE, which is published under the guidance of the English Department, presents a channel of creative communication for those students whose interests and talents are in this area. This publication is the culmination of the year's best in creative writing by Clarion State College students.

THE SEQUELLE is the college yearbook. The staff is comprised of students from all classes and curricula and truly represents all interests on campus. Staff membership is invaluable to the student who plans to teach, advise, or work in the area of journalism or photography. Professional help is available to the staff as they plan, write, and create the book.



## **RELIGIOUS PROGRAM**

THE CAMPUS MINISTRY includes students, faculty and others in a varied program of worship, religious studies, social service and personal counsel. It is independent of the College but provides a multi-dimensional Christian ministry to members of the college community. The Campus Ministry has initiated or aided such diverse programs as canoe retreats, dormitory seminars, intercollegiate conferences, a CROP Walk for Hunger, the Clarion Food Buying Club, the CSC Gospeliers, films, the recycling center, religious drama, and academic innovation in addition to its regular ministries of Folk Masses, biblical studies and personal caring.

The Campus Ministry provides a Center near campus with offices and meeting lounges which is open 7 days a week. A priest (226-6869) and a minister (226-6906) serve the Campus Ministry as full-time staff. The Campus Ministry supports the Black Campus Ministry at Clarion and works in partnership with 7 local congregations. The Campus Ministry is the representative at Clarion State College for the following churches: Roman Catholic, Methodist, Presbyterian, Lutheran, Baptist, United Church of Christ, Church of God, Episcopal, Disciples, Brethren, Moravian, and the Reformed Church. The Campus Ministry at Clarion is one of the most ecumenical agencies in existence anywhere. In addition, other religious and special interest groups use the services and facilities of the Campus Ministry. The Clarion Campus Ministry is related to the Erie Diocese of the Roman Catholic Church and the Pennsylvania Commission for United Ministries in Higher Education. It is directed by a local Council of students, faculty, and church representatives.

## **SOCIAL PROGRAM**

SORORITIES provide an opportunity for women students to develop close friendships within a group whose aims are common with their own. They promote scholarship, cultural interests, service projects, and participation in campus activities. The national sororities are Alpha Sigma Alpha, Alpha Sigma Tau, Alpha Xi Delta, Delta Sigma Theta, Delta Zeta, Phi Sigma Sigma, Sigma Sigma Sigma, and Zeta Tau Alpha.

PANHELLENIC COUNCIL is the advisory governing board for all Clarion State College sororities. The council promotes cooperation and coordination of activities and standards among sororities and between sororities and fraternities. Two representatives from each of the eight sororities on campus comprise

the membership of the council. A major social activity planned jointly by Panhellenic and Interfraternity Council is Greek Weekend which is held during the spring semester.

**FRATERNITIES.** Chapters of five national fraternities, Alpha Chi Rho, Phi Sigma Kappa, Tau Kappa Epsilon, Theta Chi and Theta Xi, in addition to four locals, Alpha Gamma Phi, Alpha Sigma Chi, Phi Sigma and Sigma Tau, are located on campus. Members of several of these organizations live in chapter houses near the campus.

**INTER-FRATERNITY COUNCIL** is the governing organization of the fraternities and is composed of representatives of the nine fraternities. Under the provisions of its constitution, it is responsible for the coordination of fraternity programs, pledging activities, and the arbitration and adjudication of violations of I.F.C. policies. In addition, it works actively with the Panhellenic Council to enhance the position and welfare of all Greek letter organizations on campus.

## **SPEECH AND DRAMATICS ORGANIZATIONS**

**PI KAPPA DELTA** is a national honorary society in forensics. Clarion students attend thirty or forty debate tournaments a year and have traveled as far as Tacoma, Washington, and New Orleans, Louisiana, to take part in intercollegiate competition in debate, oratory, and extemporaneous speaking. Active team members earn the right to membership in Pi Kappa Delta.

**COLLEGE READERS** is an organization that attempts to present a literary script with oral readers, using their voices and bodies to suggest the intellectual, emotional, and sensory experiences inherent in literature. The College Readers engage in two types of annual activities. The first kind consists of major performances on campus. The second kind of activity is travel. The Readers attend oral interpretation festivals and workshops as well as present major performances in universities, churches, and theaters requesting their work. These activities present an opportunity for constructive, informative group or professional evaluations of readings, as well as an opportunity to meet enlightened people and acquire new ideas.

**ALPHA PSI OMEGA** is a national honorary dramatics fraternity. Alpha Upsilon is the local chapter at Clarion. This organization attempts to further the student's knowledge of and association with the theater. This chapter sponsors the Alpha Psi Omega Memorial Scholarship Fund which grants deserving

theater awards to recognize students' work with a theatrical production.

**COLLEGE PLAYERS.** The Campus dramatic organization is known as the College Players. Opportunities for gaining experience in the various phases of play productions are afforded through participation in five major productions and the student-directed one-act play which are publicly produced at Clarion. There is also a Summer Theater which offers five productions each summer.

## **NEW STUDENT ORIENTATION**

All new students are expected to attend one orientation session prior to their matriculation. Usually nine separate sessions of two days' duration are conducted between the last week of June and the first week of August. Parents are welcome and encouraged to attend with their sons and daughters.

The primary objective of the program is to aid entering students in making the adjustment to life at Clarion State College. In order to facilitate that adjustment and allow students to pursue their education in the best possible manner, the academic and extra-curricular phases of college life are experienced and explored in large and small groups. Academic advisement and pre-registration information for fall semester classes culminate the program.

Registration forms and instructions will be mailed during the spring semester prior to enrollment. Students entering in January also attend during the summer.

## **GENERAL INFORMATION**

### **ACCELERATED PROGRAM**

Students who take three summer terms of twelve weeks each may finish the four-year course in three years.

### **ADVANCED PLACEMENT**

See Credit by Examination statement.

### **AWARDS**

Chemistry Department

An award for Outstanding Freshman Chemistry Major

Two awards for Outstanding Seniors

## **CORRESPONDENCE DIRECTORY**

### **Academic Affairs**

Vice President for Academic Affairs and/or Dean of Academic Services

### **Admissions**

Director of Admissions

### **Alumni Affairs**

Alumni Secretary

### **Business Affairs, Fees, Refunds**

Business Manager

### **Certification**

Dean of Professional Studies

### **Courses and Curricula**

Appropriate School Dean

### **Readmissions and Withdrawals**

Dean of Academic Services

### **Student Affairs, Organizations, Activities**

Vice President for Student Affairs

### **Summer Classes**

Dean of Summer Sessions

### **Transcripts and Records**

Records Office

Address for all above named officials:

Clarion State College

Clarion, Pennsylvania 16214

## **COURSE NUMBERING**

Courses numbered 100 to 299 inclusive are primarily for Freshmen and Sophomores; 300 to 499 for Juniors and Seniors. Some courses numbered between 400 and 499 are acceptable for graduate credit. Courses numbered above 500 carry graduate credit.

The college reserves the right to change the sequence and numbering of courses.

## **CREDIT BY EXAMINATION**

### **1. C.L.E.P.**

A maximum of 60 credits may be earned through the College-Level Examination Program (C.L.E.P.) administered by the College Entrance Examination Board. These Examinations are designed to evaluate college-level education gained through prior education or training, particularly independent study,

work experience, or armed service training. The College-Level Examination Program includes: a five-area General Examination which, if successfully passed, will grant 30 credits, or the freshman year's work, and approximately 50 subject examinations granting subject credits upon successful completion. Details on minimum scores and credits granted for both the general and subject examinations are available in the Office of Academic Services.

## 2. C.E.E.B.

Students may also earn credit and advanced standing through the Advanced Placement Program of the College Entrance Examination Board. This program is designed for high school students who expect to enter college and who have participated in one or more of the advanced classes while in high school. There are eleven subject areas in this program and any high school student who earns a score of three or better in a subject area will be granted three credits. The National Advanced Placement Examinations are given in May of each year.

## 3. Transfer Credits

For transfer students, credits granted by way of C.L.E.P. or Advanced Placement Examinations at other accredited institutions will be accepted if the minimum scores on such examinations meet the minimum standards at Clarion State College.

## 4. Proficiency Examinations

Course credits not to exceed 38 semester hours may also be earned by proficiency examination for advanced college work administered by the departments in which the particular proficiency is taught. Students who appear to possess a proficiency equal to or greater than that required in a particular course may make application for such an examination in the Office of Academic Services; the appropriate divisional dean and chairman of the subject area concerned will determine the validity of the application. Minimum qualifications for proficiency examination applications are as follows: first semester freshmen must have scored 550 or above in the verbal on the SAT; students other than first semester freshmen must have a quality point average of 2.50 or above; in no case may a student earn credit for a course more than once; and a student may not take a proficiency examination more than once for any given subject.

## 5. Residence Requirement

To be eligible for a baccalaureate degree at Clarion State

College, a student must earn a minimum of 30 semester hours credit in residence. These 30 semester hours must be approved by the appropriate school dean and department chairman of the academic area in which the degree is to be granted.

## **EVENING CLASSES**

Evening classes are organized each semester for the convenience of regular students, in-service teachers, and others who may be interested in college courses. Work done in these courses gives customary college credit and may be applied toward a degree. Information concerning course offerings may be secured by writing to the Office of Academic Affairs.

## **INDEPENDENT STUDY**

Independent study opportunities are available to students dependent upon faculty and financial resources available. Acceptance of students for independent study is voluntary on the part of a faculty member and must be approved by the appropriate department chairman, school dean, and the Vice President for Academic Affairs. Students accepted for independent study are upon request entitled to five hours of faculty time for each hour of independent study credit carried.

## **RESERVE OFFICERS TRAINING CORPS**

The United States Army offers the Reserve Officers Training Corps program at Clarion. The ROTC option offers the student I-D Selective Service classification for the period of participation. Completion of the 4 credit ROTC option has no effect on future Selective Service classifications, nor does it in any way obligate the student for later military service. The student taking an ROTC program basic course incurs no obligation to the Army or to take further Military Science courses. Enrollment in any of the freshman or sophomore level ROTC courses does not differ from enrollment in any other course in terms of commitment.

Upon graduation from the regular college course and successful completion of the Advanced Course ROTC program, the student will receive a Second Lieutenant's commission in the U. S. Army Reserve. To make this program possible, deferments from any future draft will be issued to students successfully meeting the college and ROTC requirements. Upon graduation, the former student serves on active duty for a period not to exceed two years, if called by the Secretary of the Army. This enables the student to obtain his college degree and then fulfill his obligation to his country.

Under special conditions, deferments to obtain advanced degrees are granted by the Army to ROTC students who wish to do graduate work prior to going on active duty. Additional information on this subject can be obtained at the Military Science office. Curricular details are presented on pages 103-106.

## **STUDENT RECORDS**

Student academic and personal records are confidential in nature and shall be released only to appropriate faculty, administrative officers, and parents and guardians if the student is a dependent. Release of these records to other persons, institutions, or governmental and legal agencies shall occur only upon approval by the student or graduate or upon subpoena.

Transcripts of academic work are available to the student or graduate at the Records Office when requested by him or her in writing. The first transcript is free; thereafter, the charge is \$1.00 per transcript.

## **STUDENT RESPONSIBILITY FOR ACADEMIC PROGRAM**

Each student is individually and personally responsible for learning the requirements of the curriculum which he or she is following and for seeing that these requirements are scheduled and completed for graduation. It should also be understood that information and policies presented in this catalog are subject to change before a new edition is published.

## **POLICY ON CLASS ATTENDANCE**

The college recognizes that the grade a student earns in a course should be a measure of comprehension and achievement. Regular class attendance usually promotes both of these goals. Therefore, the concept here is that the student has the responsibility for regular class attendance whenever possible. It is understood that a decision to be absent from regularly scheduled classes, for whatever reason, does not excuse the student from responsibility for examinations, knowledge of assignments, or the learnings to be facilitated by the class. Absence due to an assigned field trip or other official college business will continue to constitute an excused absence with make-up privileges. Otherwise, make-up of class work or examinations is at the discretion of the instructor. This policy is administered at the student-instructor level.

## **INTERNATIONAL EDUCATION – STUDY ABROAD**

Clarion State College, as a member of the Pennsylvania Consortium for International Education (PCIE), participates in

two four-week summer sessions at the University of Salzburg, Austria, which are taught by professors from 14 different Pennsylvania state colleges, and for which full residence credit at Clarion is granted. The Salzburg Study Program enables students to spend eight weeks in Europe in historic Salzburg at the edge of the Alps. Students combine study (courses in English) in a rich cultural setting with international experience of living in private Austrian homes. Varied events, such as visits to art galleries, concerts, excursions to historic castles and cities, and landscapes are integrated into the academic program. Week-end trips to Venice, the Bavarian castles, Vienna, Zürich and Lucerne, and to Prague are also part of the program.

The Department of Modern Languages and Cultures at Clarion offers a six-week summer session at the University of Valencia on the Mediterranean coast of Spain. Under the leadership of Dr. José Garcia of Clarion, courses in Spanish language and literature are offered at all levels, including first semester Spanish. Week-end excursions in the area and a longer trip include Alicante, Granada, Córdoba, Sevilla, and Madrid.

The Department of Modern Languages and Cultures also makes individual arrangements with students for study programs at Goethe Institutes and universities in Germany, and similar programs at French universities.

The Committee on International Education at Clarion with the Federation of German-American Clubs in Germany, has established a one-for-one student exchange with a Clarion student sponsored at a German university while a German student studies at Clarion.

Many additional international programs on all continents are available through the Clarion Fulbright Advisor.

## **THE 1976 SUMMER SESSION**

The Summer Session is maintained for the benefit of regular college students as well as for teachers in service. By taking advantage of the summer sessions, teachers can secure the professional training needed to meet the requirements for professional certification. Advanced courses are offered in the summer sessions for the benefit of teachers who desire to secure credits toward a degree in education or for permanent certification. Workshops are being added for those interested in special problems in education. Library Science certification may be added in three or four summers. Liberal Arts, Business Administration, and Graduate courses are also an important part of the summer schedule.

Clarion is attractive to those who desire to combine work



with recreation during the summer. The high elevation provides a pleasant climate, and the area offers opportunities for boating, swimming, hiking, riding, and other outdoor activities. There are two consecutive five-week periods of classes. The first starts on June 7 and ends July 9. The second starts July 12 and ends August 13.

## **VETERANS' AFFAIRS**

Clarion is approved by the Veterans Administration to offer the regular degree curricula to veterans and children of deceased veterans.

Credit for educational experience in the Armed Services is allowed on the basis of the recommendations of the American Council on Education.

Veterans seeking information should consult the Office of Academic Services.

## **ADMISSIONS**

### **ADMISSION OF FRESHMEN**

In accordance with the principles governing admission adopted by the Board of State College Presidents, four general requirements have been established for admission to State Colleges:

1. General Scholarship
2. Character and Personality
3. Health and Physical Vigor
4. College Entrance Examination Board Tests

Applicants for admission must satisfy the following requirements as outlined in detail below.

1. General scholarship as evidenced by graduation from an approved secondary school or equivalent preparation as determined by the Division of Professional Certification and Credentials Evaluation Division of the Pennsylvania Department of Education. The applicant must submit scores earned on the Scholastic Aptitude Test administered by the College Entrance Examination Board or scores earned in the American College Testing Program. Arrangements for taking these examinations are to be made through the high school guidance counselor.

2. Satisfactory character and personality traits as well as proper attitudes and interests as determined by the high school principal, guidance director, or other school official acquainted with the student.

3. Health and physical condition as evidenced by a health examination by the student's family physician, reported on the official form and approved by the college physician. No student shall be admitted to the teacher education program who has, in the opinion of the college, disabilities which would impair his service as a teacher.

4. Have the College Entrance Examination Board or the American College Testing Program send your aptitude test scores.

All liberal arts applicants and education applicants who intend to major in a foreign language must schedule an achievement test in the language, if that language has been studied in high school. The achievement tests are administered by the College Entrance Examination Board. Arrangements to take the tests may be made through the high school counselor.

### **ADMISSION WITH ADVANCED STANDING**

Applicants transferring from other institutions will not be accepted without official transcripts of credit and certificates of honorable dismissal. All applicants are required to have an interview with a member of the Admissions Staff prior to the opening of the semester in which they wish to enter. A transfer student must have a minimum of one year's residence (30 semester hours of credit) to qualify for a degree from Clarion.

Credit will be given for acceptable courses pursued in accredited collegiate institutions in which the student has made grades of A, B, or C. Where the grades are marked on a percentage basis, work graded five per cent above the minimum passing grade will be accepted. Course grades transferred from other institutions do not affect the quality point average a student earns at Clarion.

Teachers in service may complete in extension courses not more than 25 per cent of the courses required for an undergraduate degree.

Applicants who are not graduates of an approved four-year high school must have their credits evaluated by the State Department of Education, Harrisburg, Pennsylvania. Applicants who need this type of evaluation should consult the Registrar of the College. This regulation applies to teachers in service.

All persons who were graduated from a State Normal School prior to September, 1920, and who have a four-year secondary school education will be granted no more than 64 semester hours of credit toward a degree for their normal school work.

No credit for public or private teaching experience, previously credited as high school equivalent or as equivalent

professional credit toward graduation from a two-year curriculum, shall be granted toward meeting the requirements for entrance to or graduation from the four-year curriculums.

In accordance with a state regulation a maximum of six semester hours of credit may be completed in one semester while a person is engaged in full-time teaching.

No credit is given for correspondence work taken after September 1, 1927, except that pursued through the United States Armed Forces Institute or similar service organizations.

## **ADMISSION OF FRESHMEN IN AUGUST, 1976**

Applicants for admission to the freshman class in 1976 should read and observe carefully the following procedure:

1. Come or send to the Admissions Office of the College for the forms necessary in making application for admission. There are three of these: (1) the application and personnel record blank, (2) the report of the medical examination, and (3) the report from secondary school officials.
2. Send the personnel record to the College along with an application fee of \$10.00, payable to the Commonwealth of Pennsylvania. This fee is not refundable. The secondary school record must be sent directly to the College by the principal or other official of the secondary school. The medical form is to be sent after the applicant has been accepted.
3. All liberal arts applicants and education applicants who intend to major in a foreign language must schedule an achievement test in the language, if that language has been studied in high school. The achievement tests are administered by the College Entrance Examination Board. Arrangements to take the tests may be made through the high school counselor.
4. A registration fee of \$35.00 must be paid when the applicant receives notice of approval of his application for admission. This fee is not refundable.
5. Clarion State College applicants may ask for a decision as early as July 1 following their Junior year. This would require the applicant to have taken the Scholastic Aptitude Test or the American College Test in the Junior Year.

## **WITHDRAWALS**

All class withdrawals must be made through the Office of Academic Services. Classes from which a student withdraws during the first two weeks of a semester will not appear on his

record. Withdrawals between the end of the second and sixth weeks may be made without penalty. From the beginning of the seventh week of the semester through the end of the ninth week, courses from which the student withdraws will appear on the student's record a "W" plus the grade he was making at the time of withdrawal. A grade of "W-E" will be used in calculating the student's quality point average. After the beginning of the tenth week of a semester or during half of a semester session, a course from which a student withdraws shall be finally reported with a grade of "E." Exceptions may be made for withdrawals due to extenuating circumstances such as illness or some other unavoidable occurrence.

If a student is on probation at the time of withdrawal from all classes and the withdrawal is after the twelfth week of the semester, he will not be permitted to return for the following semester unless the withdrawal is based on extenuating circumstances.

If a withdrawal is not made through the office of Academic Services, a failing grade will be recorded for that course.

Any student who withdraws from the college either during or at the end of a semester must notify the Office of Academic Services of his intention to withdraw and the reason for withdrawal. This is necessary for completion of the student's permanent record. Failure to comply with this regulation will constitute an unofficial withdrawal and may affect the student's chances of future readmission or his obtaining an honorable dismissal.

## **SCHOLARSHIP REQUIREMENTS**

Student progress is normally reported once each semester. At the end of the first six weeks, each staff member submits to the Office of Academic Services a report of all freshman students doing unsatisfactory work in their classes. These reports are recorded and then passed on to the students.

### **GRADING SYSTEM**

A indicates superior attainment.

B indicates attainment above average.

C indicates average attainment.

D indicates attainment below average.

E indicates failure.

Inc indicates incomplete work.

W indicates withdrawal from a course.

WX indicates withdrawal from college.

Inc (incomplete) is not used unless a student has been in attendance through a semester or session. It indicates that the work of a student is incomplete and that the final grade is being withheld until the student fulfills all of the requirements of the course. It is used only when conditions and circumstances warrant and when evidence is presented to justify its being given.

All incomplete grades must be removed by the end of the following semester or they become failures.

**Credit—No Record Courses.** After a student has earned a minimum of 30 semester hours of credit and if he is in good academic standing, he may schedule a maximum of 6 courses or 18 semester hours for Credit—No Record. One such course may be taken each semester or summer session. The option for taking a course for Credit—No Record is limited to the first two weeks of each semester, the first four days of any six weeks summer session, and the first two days of any three weeks summer session. Satisfactory work in a Credit—No Record course shall be shown on the grade report as “Cr,” with no record and no credit for less than satisfactory work. Satisfactory work is defined as the equivalent of a “C” grade or better under the letter grading system currently in use by the college. Should a student desire to have a Credit—No Record course changed from “Cr” to a letter grade, he must retake the course. Credit—No Record courses are counted in determining the course load for a semester.

## **SCHOLARSHIP REQUIREMENTS**

Scholarship policy at Clarion State College is formulated by the Committee on Admissions, Academic, and Athletic Standards, which is a sub-committee of the Faculty Senate.

Scholastic standing of students is determined on the basis of a quality point system in which a grade of “A” equals 4 quality points per semester hour; “B” equals 3; “C” equals 2; “D” equals 1; and “E” equals 0. The number of quality points earned in a single course for one semester is determined by multiplying the quality point value of the course grade by the number of semester hours in the course; thus, a grade of “A” in a three semester hour course has a quality point value of 12. A student’s quality point average at any specific time is determined by dividing the total number of quality points earned in all courses by the total number of semester hours of credit

attempted. For example, if a student earns a total of 30 quality points from 15 semester hours of course work in a single semester, his quality point average for the semester is 2.00.

At the end of each semester, a student's quality point average is calculated for that semester and also for all the course work he has taken up to and including the semester just completed. The latter is known as the cumulative quality point average.

In order to be in good academic standing, a baccalaureate student must earn a minimum quality point average of 1.50 his first semester; 1.75 in his second and third semesters; and 2.00 in his fourth semester and thereafter. His cumulative quality point average should also be 2.00 by the end of the fourth semester.

If at the end of any semester a student has fallen below a required standard in either his semester or cumulative average, he is placed on academic probation for one full semester, effective the first semester of attendance immediately following. If he fails to achieve a satisfactory average during the probationary semester, he is placed on academic suspension for one full semester, effective the first semester of attendance immediately following. However, a student on academic probation who achieves a satisfactory semester average but does not achieve a satisfactory cumulative average is continued on probationary status for an additional semester.

Scholarship policy for *two year programs* requires that a student earn a minimum quality point average of 1.75 his first semester and a 2.00 his second semester and thereafter in order to be in satisfactory academic standing. His cumulative quality point average should be 2.00 by the end of the second semester.

Students who are placed on probation or suspended are informed by letter. A copy of the letter is also sent to the student's parent, guardian, husband, or wife.

Teacher Education students, in order to qualify for student teaching, must have a quality point average of at least 2.00 in all fields in which they are seeking certification and a cumulative quality point average of 2.00 for all their academic work. They must also have completed satisfactorily the general education requirement in English. Students having six or more semester hours of reported failure in a field of certification or in professional education courses shall not be assigned to student teaching.

All candidates for undergraduate degrees must have a cumulative average of 2.00 for all academic work and must have met the general education requirement in English in order to qualify for graduation.

## **MAXIMUM CREDIT HOUR LOAD**

The normal credit hour load for undergraduate students in good academic standing is 15 to 18 credit hours per semester. Students on academic probation should not attempt more than 12 to 15 credit hours per semester.

Students wishing to register for 18 to 21 credit hours during any one semester must have a cumulative quality point average of 3.00 or better, or the written permission of the appropriate school dean.

All scholastic standards noted above are subject to change by the college.

## **UNDERGRADUATE DEGREE PROGRAMS**

The Associate Degree program in Nursing at Clarion is a two year course of study that is technical in nature. Admission requirements and procedures are the same as for the bachelor's degree programs, and the degree of Associate in Science is awarded upon completion of an approved program of study.

Clarion State College offers combined academic and professional education curricula leading to the undergraduate degrees of Bachelor of Arts, Bachelor of Science, Bachelor of Science in Business Administration, and Bachelor of Science in Education with certification for teaching in the public elementary and secondary schools of the Commonwealth of Pennsylvania.

## **BUSINESS ADMINISTRATION**

All students majoring in Business Administration are required to take a broad program of business foundation subjects and then choose a business field of specialization in one of the following concentration areas:

1. ACCOUNTING
2. COMPUTER AND QUANTITATIVE SCIENCE
3. ECONOMICS
4. FINANCE
5. MANAGEMENT
6. MARKETING
7. OFFICE MANAGEMENT

## **LIBERAL ARTS AND SCIENCES**

Students may earn the Bachelor of Arts degree with a major in one of the following fields: Biology, Mathematics, Physics, Chemistry, Earth Science, Art, Music, Theater, French, German, Spanish, English, Speech Communication, Philosophy, Psychology, Sociology, Economics, History, Geography, and Political

Science. They may earn the Bachelor of Science degree with a major in: Biology, Mathematics, Physics, Chemistry, Earth Science, Medical Technology, Psychology, and Geography. The following interdisciplinary degrees are also available: area major in the Humanities, area major in the Social Sciences, area major in the Natural Sciences and Mathematics, Speech Communication and Theater, and Sociology/Anthropology.

## **TEACHER EDUCATION**

Students working toward the Bachelor of Science in Education may choose among curricula leading to certification in the following areas:

1. EARLY CHILDHOOD EDUCATION
2. ELEMENTARY EDUCATION
3. LIBRARY SCIENCE
4. MUSIC EDUCATION
5. PUBLIC SCHOOL NURSING
6. SECONDARY EDUCATION
  - a. Biology
  - b. Chemistry
  - c. Communication Arts
  - d. Earth and Space Science
  - e. English
  - f. French
  - g. General Science
  - h. German
  - i. Mathematics
  - j. Physics
  - k. Social Studies
  - l. Spanish
7. SPECIAL EDUCATION
8. SPEECH PATHOLOGY AND AUDIOLOGY

Students may also plan their programs to extend their certification to include Environmental Education or Safe Driving and General Safety Education.

## **GRADUATE STUDY**

Clarion State College offers 15 graduate level programs leading to the Master of Arts, Master of Business Administration, Master of Education, Master of Science, or Master of Science in Library Science degrees. The Master of Arts degree is awarded in English, history, and mathematics. A comprehensive program leads to the Master of Business Administration. The Master of Education is awarded in the fields of biology,



elementary education, mathematics, reading education, science education, and speech pathology. The Master of Science degree is awarded in biology, communication, mathematics, and special education. There is also a program leading to the degree of Master of Science in Library Science.

## FINANCIAL INFORMATION

(Subject to Change Without Notice)

Summary of approximate costs per academic year (August to May) for undergraduate Pennsylvania residents. Semester charges are one-half the amounts shown. Commuting students pay the same costs except the item for room and board. Costs of room and board may vary for students living in privately-owned residence halls. (Graduate students should check the Graduate Bulletin regarding fees.)

|                                      |          |
|--------------------------------------|----------|
| Basic Fee .....                      | \$ 750.  |
| Activity Fee .....                   | 70.      |
| Room and Board .....                 | 882.     |
| Student Community Building Fee ..... | 20.      |
| Est. Cost — Books & Supplies .....   | 175.     |
| TOTAL .....                          | \$1,897. |

### I. ACTIVITY FEE

This fee, collected from all regularly enrolled students, is administered through a student organization approved by the Board of Trustees. It covers the cost of athletic entertainment, publications, etc. Students carrying twelve semester hours or more must pay this fee. Students taking fewer than twelve semester hours may take advantage of the program by paying this fee. The fee, determined and collected by the Clarion Students' Association, is \$35.00 each semester. Student Activity Fee for Summer Sessions is \$1.00 per week (fee subject to change). The Activity Fee must be paid prior to or at the time of registration. Certified checks or money orders covering activity fees must be made payable to CLARION STUDENTS' ASSOCIATION.

Activity Fee refunds are governed by the following policy:

- A. Full time graduate students are to pay the regular activity fee.
- B. Activity fee refunds are to be made consistent with the following policies.

1. A refund of a pre-paid activity fee will be given upon withdrawal for transfer purposes if the following conditions are fulfilled and if the following are received at the Students' Association Office before the first day of the semester for which the fee was prepaid.
    - a. A written request by the transferring student.
    - b. An ID card must be submitted.
    - c. A letter of acceptance from the college admissions office of the institution to which the student is transferring.
  2. No refund will be given for suspension, withdrawal or dismissal.
- C. Student teachers practicing outside a 50 mile radius of Clarion as established by the map on file at the Students' Association Office will be assessed one half of the activity fee per semester.
- D. Student teachers practicing within the 50 mile radius of Clarion will pay the full activity fee.

## II. BASIC FEE

- A. Basic Fees for residents of Pennsylvania, amounting to \$750.00 (\$375 per semester), shall be charged to cover registration and keeping of records of students, library, student health service (other than extra nurse and quarantine), and laboratory facilities. Checks in these amounts must be made payable to the COMMONWEALTH OF PENNSYLVANIA. Basic Fees for eleven (11) or fewer semester hours of credit during a semester are as follows:

\$31.00 per hour for Pennsylvania residents

\$46.00 per hour for out-of-state students

For the summer sessions, Basic Fees are determined by the semester hour rates indicated above.

- B. Fees for Out-of-State Students. A student who does not have a Pennsylvania domicile is classified as out-of-state and must pay \$46.00 per semester hour. The amounts for the Activity Fee, Room and Board charges, and costs of books and supplies are the same as for students who are Pennsylvania residents. Domicile is defined as the place where one intends to and does in fact permanently reside. Determination of Pennsylvania domicile is made on the

basis of documentary evidence, statements from disinterested persons and the presumptions set forth below:

1. Continuous residence in Pennsylvania for a period of 12 months prior to registration creates a presumption of domicile.
2. A person attempting to establish domicile must have citizenship or proof of intention to become a citizen or must have been admitted to the United States on an Immigrant Visa.
3. A married woman is presumed to have the domicile of her husband.
4. A minor is presumed to have the domicile of parent(s) or guardian.
5. A member of the Armed Forces who was domiciled in Pennsylvania immediately preceding entry into government service and who has continuously maintained Pennsylvania as a legal residence, will be presumed to have a Pennsylvania domicile.
6. A student receiving a scholarship or grant dependent upon domicile, from a state other than Pennsylvania, is not domiciled in Pennsylvania.

Examples of factors which may provide convincing documentary evidence includes purchase or lease of a permanent independent residence, payment of appropriate state and local taxes, transfer of bank accounts, stock, automobile, and other registered property to Pennsylvania, driver's license, agreement for permanent full time employment, membership in organizations, voter's registration, statement of intention to reside indefinitely in Pennsylvania, statement from parent(s) or guardian setting forth facts to establish minor's financial independence and separate residence.

A student may challenge residency classification by filing a written petition with the Business Office. If a student is not satisfied with the decision of the Business Office, an appeal may be made to the Vice President for Finance. If the answer is still unsatisfactory, a student may take a written appeal to the office of the Secretary of Education. His decision on the challenge shall be final.

### C. Part-Time and Summer School Fees

For Pennsylvania residents: \$31.00 per semester hour.

For out-of-state students: \$46.00 per semester hour.

Activity fees for all students are \$6.00 per six-week session.

Board and room is \$147.00 per six-week session and \$73.50 per three-week session.

Books and supplies are estimated at \$30.00 per six-week session and \$20.00 per three-week session.

### III. HOUSING FEE (Private residence hall charges may vary.)

- A. For board, furnished room, heat and light the charge will be \$882.00 for the academic year. No reduction shall be allowed for absences from the college.
- B. Students are responsible for damage, breakage, loss, or delayed return of college property. The charges shall be equal to the extent of the loss.
- C. The rental contract for college residence halls shall be for the semester, mid-term graduates or student teachers excluded.
- D. For students rooming off campus in private homes or off-campus residence halls and boarding in the college dining room, board shall be \$225.00 per semester and \$12.50 per week during the summer sessions.
- E. Cost of meals for transients: breakfast, 90¢; lunch, \$1.25; dinner, \$1.75.
- F. Transient lodging fee: \$3.00 plus tax per night per person.

### IV. MISCELLANEOUS FEES

- A. Deposits. Students who plan to return to college in August must reserve a place at the college by pre-paying a non-refundable Student Activity Fee of \$35.00 not later than April 20. Certified check or money order should be payable to Clarion Students' Association. The student's name should be printed in the lower left corner of the check or money order. PLEASE DO NOT MAIL CASH. Residence Hall students are required to make a non-refundable deposit of \$50.00 to reserve a room for the fall semester. Payment must be by certified check or money order. Information concerning this deposit will be received from the Office of the Vice President for Student Affairs. Application for admission as either freshman or transfer student must be accompanied by a \$10.00 fee to cover the cost of processing, interviewing, and admission. The fee will not be credited to the student's account as a part payment of basic, housing, or other fees. An additional fee of \$35.00 must be paid upon receipt of notice of approval of the application. This \$35.00 fee is

not refundable, but will be applied to the student's basic fee upon registration. Certified checks or money orders for these amounts must be drawn to the Commonwealth of Pennsylvania.

- B. Diploma Fee. A fee of \$5.00 is paid by each degree candidate to cover the cost of executing his diploma.
- C. Late Registration Fee. Each student registering after the date officially set for registration will be required to pay a late registration charge of \$10.00. The same regulation shall apply to students who do not complete registration on assigned days. When permission for late registration has been secured from the Business Manager because of illness or any other unavoidable cause, this fee may be waived. Registration is not complete until all fees are paid.
- D. Schedule Change Fee. A student requesting a change of course or courses during Drop—Add Week is charged \$2.00.
- E. Transcript Fee. One copy of a transcript of credits earned at Clarion State College will be issued free of charge. A charge of \$1.00 is made for each subsequent transcript. Persons desiring to have their credits transferred to another institution should give the name and address of such institution. Transcripts will not be issued to anyone who has unpaid bills, library fines, or damage fees on his account.
- F. Student Community Building Fee. This non-refundable fee is mandated by State law to retire the general obligation bonds for the Riemer Student Community Building. The fee is \$10.00 per semester for students taking 10 or more credits. For part-time students, the fee is pro-rated as follows: 7—9 credits \$5.00, 1—6 credits \$2.50 per semester. For summer sessions the fee is \$2.00 per six-week session.
- G. Medical Service Fees. A charge of \$3.90 per day will be assessed to students without a food contract at Chandler Dining Hall to cover the cost of meals while the student is in the infirmary. Students will be charged for any medicines not stocked by the infirmary. They have the privilege of employing their own physician at personal expense if they desire. If in the case of a serious illness or injury, the college physician or nurse believes that transportation is necessary to the infirmary or to a local or home hospital, such transportation will be provided by ambulance, but the expense must be borne by the student.

## V. PRIVATE MUSIC INSTRUCTION FEES

Students enrolled as Music Majors pay no extra fees for required private music instruction in voice, piano, band, or orchestra instruments nor for use of pianos or other instruments for practice.

For all students other than Music Majors, the charge for private lessons in voice, piano, band, or orchestra instruments is \$32.00 per semester for one lesson per week. Rental of a piano for practice one period per day is \$6.00 per semester. Rental of band or orchestra instruments is \$8.00 per semester.

## VI. PAYMENT OF FEES

ALL FEES MUST BE PAID IN ADVANCE AND NO STUDENT AGAINST WHOM THERE ARE ANY UNPAID CHARGES SHALL BE ALLOWED TO ENROLL, GRADUATE, OR RECEIVE A TRANSCRIPT OF RECORD.

When a check is presented covering fees, the student is responsible to see that funds are available when the check is presented for payment at the bank. If an uncollectible check is returned by the bank, the Department of Education Return Check Recovery Section will notify you that your check was uncollectible, add a \$10.00 penalty, and request that a certified check or money order be sent within ten (10) days. Furthermore, any student that has a delinquent account, either because of non-payment of fees or due to the writing of a worthless check for payment of same will not be permitted to attend classes or receive current grades or transcripts until all accounts are paid in full.

## VII. REFUNDS

Refunds are not granted on an automatic basis. A student eligible for a refund must officially withdraw through the Office of Academic Services and also submit a written request to the Business Office.

Upon request, a full refund of fees paid in advance will be granted to students who have been dismissed from college for academic reasons.

Partial refunds, or credits, will be granted to students who have made an official withdrawal from college based upon a percentage of the fees paid according to the following schedule:

## SEMESTER WITHDRAWAL

|                  |            |
|------------------|------------|
| 1st and 2nd week | 80% Refund |
| 3rd and 4th week | 60% Refund |
| 5th and 6th week | 40% Refund |
| After 6th week   | 0% Refund  |

## SUMMER SESSION — SIX WEEK SESSION

|          |            |
|----------|------------|
| 1st week | 60% Refund |
| 2nd week | 40% Refund |
| 3rd week | 0% Refund  |

All basic fees, special fees, housing fees, dining privileges, and activity fees are due and payable on a full semester basis upon registration. The college does not defer payment. Students who cannot pay all charges in full at registration should arrange a loan at their bank. A student whose educational expenses are being partially paid by a National Direct Student Loan, Educational Opportunity Grant, or Pennsylvania State Scholarship will be required to pay the balance of the charges due in order to complete registration and avoid the \$10.00 late registration fee. The college does not assume responsibility for charges by privately-owned residence halls or rooming facilities.

## FEE CHARGES PER SEMESTER

Subject to Change Without Notice  
(Does Not Include Activity Fee)

### COMMUTING STUDENTS

|                         |              |
|-------------------------|--------------|
| Basic                   | \$375        |
| Student Comm. Bldg. Fee | 10           |
| <b>TOTAL</b>            | <b>\$385</b> |

### RESIDENT STUDENTS\*

|                         |              |
|-------------------------|--------------|
| Basic                   | \$375        |
| Student Comm. Bldg. Fee | 10           |
| Room and Board          | 441          |
| <b>TOTAL</b>            | <b>\$826</b> |

### BOARDING STUDENTS ONLY

|                         |              |
|-------------------------|--------------|
| Basic                   | \$375        |
| Student Comm. Bldg. Fee | 10           |
| Board                   | 225          |
| <b>TOTAL</b>            | <b>\$610</b> |

\* Private residence hall charges may vary

## **FINANCIAL AID SERVICES**

Financial assistance is available to students in the form of scholarships, grants, loans, and employment. Detailed information and necessary application forms may be secured from the Office of Financial Aid. Since the determination of eligibility for assistance is based on an analysis of a current Parents' Confidential Statement, students are encouraged to request their parents to file a completed statement with the College Scholarship Service, Princeton, New Jersey, and designate Clarion State College to receive a copy. Clarion adheres to the college financial aid principles as set forth by the College Scholarship Service.

### **SCHOLARSHIPS AND GRANTS**

**PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY SCHOLARSHIPS.** The determination of recipients of these scholarships is made by the Agency. The scholarships vary in amount and are based on the financial need of students. Application forms may be secured from the Agency or from high school guidance counselors.

**EDUCATIONAL OPPORTUNITY GRANTS.** Federal grants to a maximum of \$1,000 are available to entering freshmen with "exceptional financial need" as defined by regulations of the United States Office of Education. Matching financial assistance designed to provide sufficient funds for a student to complete a college program is provided to designated recipients of Educational Opportunity Grants.

**BASIC EDUCATIONAL OPPORTUNITY GRANTS —** Federal grants available to students not enrolled in post-secondary courses for the first time prior to April, 1973. Recipients determined by the U. S. Office of Education based on financial need.

**SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS —** Federal grants available to students with "exceptional financial need" as defined by regulations of the U. S. Office of Education. The grants may not exceed one-half of the total amount of financial aid provided for the student and must be matched in an equal amount by scholarship, loan, or work grant.

**NURSING SCHOLARSHIPS.** Federal grants to a maximum of \$1,500 are available to students with "exceptional financial need," as defined by regulations of the U. S. Department of



Health, Education, and Welfare, who are enrolled in the Associate Degree Nursing Program. Application forms may be secured from the Office of Financial Aid.

**H. W. COLEGROVE SCHOLARSHIP FUND.** A trust fund established by Mr. H. W. Colegrove at the First National Bank of Port Allegany provides for two scholarships of \$100 each per year to be awarded to women students from McKean County. Women students from this county may secure information concerning these scholarships from the Office of Financial Aid.

**MARIAN RENN MARSHALL FUND.** This fund, established as a memorial to Marian Renn Marshall, is designed to provide emergency financial aid to students enrolled in Speech Pathology and Audiology for the facilitation of special projects. Specific information concerning requirements for obtaining assistance may be secured from the Coordinator of Speech Pathology and Audiology.

**ELVINA C. MOYER SCHOLARSHIP FUND.** This scholarship fund was established by the will of the late Anna B. Lilly to be financed through income received from funds held in trust. Although the scholarship varies from year to year, it now approximates \$180. A loan equal to the scholarship is available to the designated recipient. The selection of a student to receive the scholarship is made by the faculty of the College.

**CLARION STATE COLLEGE SCHOLARSHIP FUND.** A number of four-year scholarships of \$100.00 each year (\$400.00 for four years) are available to incoming freshmen. The Financial Aid Committee will select recipients on the basis of high school achievement, entrance examination results, extra-class activities, and personal interviews (for finalists). Applicants for these scholarships must have been accepted for admission to the college. Application forms, which may be secured from the Director of Admissions, must be received by March 1.

**OIL CITY ADELPHOI CLUB SCHOLARSHIPS.** Two scholarships of \$250 per year are awarded by the Oil City Adelphoi Club to selected students attending Clarion State College on the Venango Campus. Information concerning the scholarships may be obtained from high school guidance counselors or the Secretary of the Oil City Adelphoi Club.

**OIL CITY LIONS CLUB SCHOLARSHIP.** An annual scholarship of \$250 is awarded by the Oil City Lions Club to a selected student from any Oil City high school or the Cranberry

Area High School who attends Clarion State College on the Venango Campus. Information concerning the scholarship may be obtained from high school guidance counselors or the Secretary of the Oil City Lions Club.

**UNITED STATES OFFICE OF EDUCATION**  
**TRAINEESHIPS IN SPECIAL EDUCATION.** Junior and senior students majoring in Special Education (Mental Retardation) may qualify for these stipend scholarships which provide \$800 stipends and an exemption of fees for senior students and \$300 stipends for junior students. Awards are based upon outstanding promise to the profession of Special Education. Applications are distributed at the Special Education Center during the Spring Semester.

## **LOANS**

**NATIONAL DIRECT STUDENT LOAN PROGRAM.** This program provides for loans to students who have a demonstrated need for financial assistance and who are in good academic standing. Loans totaling more than \$250,000 were granted to students under this program during the 1974-75 college year.

To be eligible for consideration for a loan, a student must complete an application form, have a current Parents' Confidential Statement on file in the Office of Financial Aid, be a citizen of the United States or have declared his intention to obtain citizenship, be enrolled or accepted for enrollment as a full-time student.

These loans, which are non-interest bearing while a student is enrolled, are available to a maximum of \$2500 for the first two years with a limit of \$5,000 for the bachelor's degree. Repayment of the loan may extend over a ten-year period beginning nine months after withdrawal or graduation from the College. Repayments are to be made on a quarterly basis with interest accruing at the rate of three per cent per year. The first quarterly payment of principal and interest is due one year after graduation or withdrawal.

In specified teaching situations, as much as fifteen per cent of the loan may be canceled for each year of teaching. The borrower's obligation to repay the loan is canceled in the event of death or permanent and total disability.

Completed applications for National Direct Student Loans should be submitted to the Office of Financial Aid.

**NURSING STUDENT LOAN PROGRAM.** This program provides loans to students enrolled in the Associate Degree Nursing Program.

To be eligible for consideration for a loan, a student must complete an application form, have a current Parents' Confidential Statement on file in the Office of Financial Aid, be a citizen of the United States or have filed intent to become a permanent resident of the United States, be enrolled or accepted for enrollment as a full-time student, and have financial need for the amount of the loan.

These loans, which are non-interest bearing while a student is enrolled, may not exceed \$1,500 in an academic year. Repayment provisions are similar to those for National Direct Student Loans. Cancellation features are also provided.

**PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY GUARANTEED LOANS.** Loans to a maximum of \$1500 per academic year for students in good academic standing are generally available from local banks and savings and loan associations. The loans are guaranteed by the Agency. Application forms and detailed information may be secured from the financial institution from which a loan will be requested.

**CLARION STATE COLLEGE FOUNDATION REVOLVING LOAN FUND — EMERGENCY LOAN.** The Foundation has established an emergency loan fund for educational purposes only, which is available to full-time students in good standing. Loans may be granted to a maximum of \$200.00 and must be approved by the Director of Financial Aid. The loans are interest free for six months and thereafter interest is added at the rate of 6 per cent per annum with a minimum interest charge of \$5.00. Loans plus interest are due and payable prior to graduation or withdrawal from College. Application forms may be secured from the Office of Financial Aid.

**BOWL LOAN FUND.** Income received from a football bowl game in which the Clarion State College team participated several years ago and contributions from friends of the College made possible the establishment of this loan. Short-term loans to a maximum of \$150 are available to students who are in financial need, are enrolled as full-time students with at least fifteen semester hours of credit earned at Clarion State College, and are approved by a coach of a varsity sport, the Director of Athletics, and the Director of Financial Aid. Application forms may be secured from the Office of Financial Aid.

**H. W. COLEGROVE EDUCATIONAL LOAN FUND.** The will of Mr. H. W. Colegrove provides that the First National Bank of Port Allegany may make loans to college students from

an established fund to a maximum of \$200 in any one year with no more than \$500 to any one student during the completion of his college program. The rate of interest is two per cent while the student is enrolled and four per cent per year after withdrawal or graduation. Information concerning this loan may be secured from the First National Bank of Port Allegany.

**CLARION STATE COLLEGE FOUNDATION REVOLVING LOAN FUND — SHORT-TERM SMALL LOAN.** The Foundation has also established a short-term small loan fund which is available to full-time students. Loans are granted to a maximum of \$20.00, are interest free and must be repaid within thirty days. The loans are approved by the Director of Financial Aid.

**MARY STERRETT MOSES AND ELBERT RAYMOND MOSES, JR., LOAN FUND.** This loan fund has been established to provide graduate students majoring in Speech or related areas with an opportunity to borrow interest free a maximum of \$100 per academic year. Information concerning this loan fund may be secured in the Office of Financial Aid.

**MARY ANN TRANCE LOAN FUND.** Established as a memorial to the late Mary Ann Trance by her college friends and her mother, this fund of \$200 is available to a senior woman student. The loan available from the fund is non-interest bearing and repayable after graduation. Information concerning this loan may be secured from the Office of Financial Aid.

**CLARENCE E. AND JANET H. LESSER SCHOLARSHIP FUND.** Established by the will of Clarence E. Lesser, this trust fund provides scholarships to assist deserving students at Clarion State College. Approximately six \$500 per year continuing scholarships will be offered annually to incoming freshmen. Applicants must have been accepted for admission by the college and recipients will be chosen by a committee composed of students, faculty, and/or administrators. Application forms, which may be secured from the Office of Financial Aid, must be received by March 15.

**QUAKER STATE NURSING SCHOLARSHIPS.** Quaker State Oil Refining Corporation has established two \$500 tuition grants for full-time students enrolled in the second year of the Associate Degree Nursing Program. A Selection Committee will nominate students on the basis of professional potential skills, scholastic achievement, and financial need. Awards will be made by a Scholarship Committee composed of representatives of Quaker State Oil Refining Corporation, Clarion State College, and the Oil City Hospital.

## **EMPLOYMENT**

Employment on a part-time basis is available to the extent that funds are provided for this purpose by the Federal government and the Commonwealth of Pennsylvania. The assignment of students to part-time campus positions is generally based on financial need; however, it should be recognized that such employment will not be sufficient to meet the total expenses of attending college.

**FEDERAL WORK-STUDY PROGRAM.** The College participates in the Federal Work-Study Program which permits eligible students to work a maximum of 15 hours per week while classes are in session. A limited number of positions are available under this program for full-time employment during vacation periods. Eligibility requirements for employment include United States citizenship, demonstrated financial need as determined by a current Parents' Confidential Statement, and satisfactory academic standing.

**STATE EMPLOYMENT PROGRAM.** A limited number of part-time positions are available under this program to students with satisfactory academic standing and some financial need. Most student positions are limited to a maximum of 15 hours of employment per week.

## **COLLEGE CURRICULA**

All undergraduate curricula, with the exception of the two-year Associate of Science curriculum in Nursing, lead to a bachelor's degree and have a common area of 48 semester hours in general education. The general education distribution is intended to encourage broad choice within the humanities, the natural sciences and mathematics, and the social sciences for the development of a strong liberal education. Each student should select his general education program carefully in consultation with his faculty advisor.

## **GENERAL EDUCATION DISTRIBUTION**

The general education course distribution listed on the next page becomes effective for students whose initial enrollment at Clarion begins on August 25, 1975, or thereafter. The distribution is not applicable to students enrolled before the above date. Those students should follow the general education distribution in effect at the time of their admission.

The minimum credit hour requirement in general education is 48 semester hours distributed as follows:\*

- I. Modes of Communication ..... (minimum) 12 s.h.  
English Composition ..... 3–6 s.h.  
Courses to be selected from two of the following:  
    Computer Science, Elementary Foreign Language,\*\*  
    Logic, Mathematics, Speech ..... 6–9 s.h.
- II. Natural Sciences and Mathematics ..... (minimum) 9 s.h.  
Courses to be chosen from at least two of the following fields:  
    Biology, Chemistry, Mathematics, Physical Geography,  
    Physical Science, Physics.
- III. Social Science ..... (minimum) 9 s.h.  
Courses to be selected from at least two of the following  
fields:  
    Economics, Political Science, Psychology, Sociology,  
    Geography, Anthropology
- IV. Humanities ..... (minimum) 9 s.h.  
Courses to be chosen from at least two of the following  
fields:  
    Art, English, Foreign Language, History, Literature,  
    Music, Philosophy, Speech, Theater
- V. Personal Development and Life Skills ..... (minimum) 9 s.h.  
Health ..... 2 s.h.  
Physical Education Activity Courses ..... 2 s.h.  
(Maximum of 2 credits in physical education activity courses counted  
toward graduation)  
Courses chosen from General Studies or other disciplinary areas or  
approved student activities for credit ..... (minimum) 5 s.h.

\*The distribution may be altered somewhat for certain major fields.

\*\*May not be used to meet School requirement in foreign language in School of Arts and Sciences.

## BUSINESS ADMINISTRATION

### OBJECTIVES OF THE CURRICULUM

The curriculum leading to the degree of Bachelor of Science in Business Administration is designed to assist students in arriving at a better understanding of the complex relationships inherent in the rapidly changing world of business, industry, and government; to provide educational experiences that will help students develop their potentialities for leadership and service; to help stimulate the growth of students as individuals

and citizens; and to provide a qualitative environment in which educational enrichment can take place.

Supplemented by broad general requirements in the humanities, the social sciences, and the natural sciences, the business curriculum offers a well balanced program of courses in business administration which not only will help to prepare students for careers in business, industry, and government but also will give preparatory training to students who plan to further their education through graduate study in business, economics, or law.

Although there is opportunity to develop some depth in certain areas, such as accounting, computer and quantitative science, economics, finance, management, and marketing, the emphasis in the program is not on deep specialization but rather on the development of analytical ability, intellectual toughness, imagination, the ability to communicate ideas, and adaptability, so that technological change does not render the education obsolete.

**ADMISSION AND FEES**

Admission to the business administration program is governed by the admission policy presented on pages 31–33 of this catalog.

All fees and other charges for the business administration program can be found on pages 39–45.

**SCHOLARSHIP REQUIREMENTS**

The scholarship requirements for business administration students are identical to those of all other students in Clarion State College, summarized on pages 34–37.

**THE CURRICULUM**

Semester hour credits required for the degree of Bachelor of Science in Business Administration distributed as follows:

|                                   |             |
|-----------------------------------|-------------|
| General Education:                | 48          |
| Business Foundation subjects:     | 36          |
| Business and Economics Electives: | 24          |
| Free Electives:                   | <u>20</u>   |
| Total required for graduation:    | 128 credits |

**GENERAL EDUCATION** **48 credits**

The general education distribution for all students in the college is presented on pages 51–52. Students majoring in

Business Administration must include six credits in mathematics not including Math 111, 112 or 130 in fulfilling general education or free elective requirements.

|                                    |            |
|------------------------------------|------------|
| MODES OF COMMUNICATION             | 12 credits |
| NATURAL SCIENCES & MATHEMATICS     | 9 credits  |
| SOCIAL SCIENCES                    | 9 credits  |
| HUMANITIES                         | 9 credits  |
| PERSONAL DEVELOPMENT & LIFE SKILLS | 9 credits  |
| Health and Physical Education      |            |

## **BUSINESS FOUNDATION SUBJECTS** **36 credits**

The courses included as *Foundation Subjects* have been selected with three primary objectives in mind: (1) To give students an insight into the major functions of organizations whether they be private business firms or local, state, or federal governmental agencies; (2) To give students an understanding of the major problems within organizations as they pursue their goals; and (3) To assist students in using the insights and methods of the humanities, social sciences, and natural sciences to analyze and illuminate these problems. Each of the Foundation Subjects either deals with an important aspect of organization or provides a tool which can be used in attacking problems that individuals face in organizations. The courses as a whole comprise a common body of knowledge in business and administration.

The following foundation courses are required of all business administration students:

### **ACCOUNTING AND QUANTITATIVE**

|                                    |           |
|------------------------------------|-----------|
| BA 102: Intro. to Data Processing  | 3 credits |
| BA 151: Financial Accounting       | 3 credits |
| BA 152: Managerial Accounting      | 3 credits |
| EC 221: Bus. & Econ. Statistics I  | 3 credits |
| EC 222: Bus. & Econ. Statistics II | 3 credits |

### **ENVIRONMENTAL**

|   |           |
|---|-----------|
| BA 120: Introduction to Business  | 3 credits |
| BA 240: Legal Environment I   | 3 credits |
| EC 310: Microeconomic Theory  | 3 credits |
| Note: Econ. 211, 212:<br>Principles of Economics I,<br>II are prerequisites to<br>the above course. |           |

### **FUNCTIONS**

|                                 |           |
|---------------------------------|-----------|
| BA 360: Principles of Marketing | 3 credits |
|---------------------------------|-----------|



|                               |           |
|-------------------------------|-----------|
| BA 370: Financial Management  | 3 credits |
| BA 425: Production Management | 3 credits |

## ADMINISTRATIVE PROCESS

|                              |           |
|------------------------------|-----------|
| BA 490: Adm. Decision Making | 3 credits |
|------------------------------|-----------|

## BUSINESS AND ECONOMICS ELECTIVES 24 credits

Students majoring in Business Administration are required to elect a minimum of 24 credits in business and/or economics courses beyond the prescribed courses in general education and foundation subjects. The electives must be so chosen to meet requirements of one of the areas of concentration. The areas are Accounting, Computer and Quantitative Science, Economics, Finance, Management, Marketing, and Office Management. The courses required for each area are listed below. The additional courses needed to meet the minimum 24 credits in business and economics courses will be elected in consultation with the student's advisor.

### ACCOUNTING

|  |           |
|--|-----------|
| Bus. Ad. 251: Intermediate Accounting                    | 3 credits |
| Bus. Ad. 253: Federal Taxes                              | 3 credits |
| Bus. Ad. 351: Cost Accounting                            | 3 credits |
| Bus. Ad. 354: Accounting for Equities                    | 3 credits |
| Bus. Ad. 355: Advanced Accounting                        | 3 credits |
| One course from the following:                           | 3 credits |
| Bus. Ad. 353: Auditing                                   |           |
| Bus. Ad. 451: Accounting Problems                        |           |
| Bus. Ad. 453: Problems in Federal Taxation<br>Accounting |           |

### COMPUTER AND QUANTITATIVE SCIENCE

|   |           |
|---|-----------|
| Bus. Ad. 103: Business Computer Program-<br>ming – Cobol        | 3 credits |
| Comp. Sci.201:Computer Science III                              | 3 credits |
| Bus. Ad. 203: Computer Programming of<br>Business Systems-Cobol | 3 credits |
| Econ. 423: Statistical Tools of Quantitative<br>Analysis        | 3 credits |
| One course from the following:                                  | 3 credits |
| Comp. Sci. 301: Computer Science IV                             |           |
| Bus. Ad. 420: Operations Research I                             |           |
| Bus. Ad. 421: Operations Research II                            |           |

## ECONOMICS

|                                 |                                  |           |
|---------------------------------|----------------------------------|-----------|
| Econ. 311:                      | Macroeconomic Theory             | 3 credits |
| Econ. 370:                      | Money and Banking                | 3 credits |
| Econ. 490:                      | History of Economic Thought      | 3 credits |
| Two courses from the following: |                                  | 6 credits |
| Econ. 312:                      | Comparative Systems              |           |
| Econ. 340:                      | Government Regulations           |           |
| Econ. 351:                      | Industrial Relations             |           |
| Econ. 361:                      | International Economic Relations |           |
| Econ. 471:                      | Public Finance                   |           |

## FINANCE

|               |                     |           |
|---------------|---------------------|-----------|
| Bus. Ad. 471: | Securities Analysis | 3 credits |
| Bus. Ad. 476: | Financial Problems  | 3 credits |
| Econ. 370:    | Money and Banking   | 3 credits |
| Econ. 371:    | Public Finance      | 3 credits |

## MANAGEMENT

|                                 |                                |           |
|---------------------------------|--------------------------------|-----------|
| Bus. Ad. 220:                   | Principles of Management       | 3 credits |
| Bus. Ad. 321:                   | Organization Theory & Behavior | 3 credits |
| Bus. Ad. 424:                   | Personnel Management           | 3 credits |
| Two courses from the following: |                                | 6 credits |
| Econ. 351:                      | Industrial Relations           |           |
| Econ. 410:                      | Managerial Economics           |           |
| Bus. Ad. 420:                   | Operations Research I          |           |
| Bus. Ad. 421:                   | Operations Research II         |           |

## MARKETING

|                                   |                                  |           |
|-----------------------------------|----------------------------------|-----------|
| Bus. Ad. 461:                     | Marketing Research               | 3 credits |
| Bus. Ad. 465:                     | Marketing Problems               | 3 credits |
| Three courses from the following: |                                  | 9 credits |
| Bus. Ad. 361:                     | Marketing Management             |           |
| Bus. Ad. 362:                     | Retailing Management             |           |
| Bus. Ad. 363:                     | Advertising Management           |           |
| Bus. Ad. 366:                     | Physical Distribution Management |           |
| Bus. Ad. 460:                     | Sales Management                 |           |
| Bus. Ad. 468:                     | Consumer Behavior                |           |

## OFFICE MANAGEMENT

The first two years of this area of concentration are offered only on the Venango Campus. Students will at their option receive a certificate of completion at the end of two years.

|                                      |       |
|--------------------------------------|-------|
| Required Courses first two years     | s. h. |
| General Education                    | 26    |
| General Business Courses             | 18    |
| Skills Area:                         |       |
| Bus. Ad. 131: College Typing         | 2     |
| Bus. Ad. 132: Production Typing      | 3     |
| Bus. Ad. 135: College Shorthand      | 2     |
| Bus. Ad. 136: Production Short-      |       |
| hand                                 | 3     |
| Bus. Ad. 230: Secretarial Procedures |       |
| Workshop                             | 4     |
| Bus. Ad. 231: Office Practicum       | 4     |
| Electives                            | 2     |
| Total for Certificate                | 64    |

Students moving into the bachelor's degree program will complete their work on the Clarion Campus. They will be held for all the common requirements for the Bachelor of Science in Business Administration degree and the following specific courses in Administrative Science.

- Bus. Ad. 220: Principles of Management
- Bus. Ad. 221: Office Management
- Bus. Ad. 321: Organization Theory and Behavior
- Bus. Ad. 424: Personnel Management

## FREE ELECTIVES

**14 credits**

Free electives are available for the student. They may be selected in consultation with the student's advisor in any area of course work offered in the college.

## ADDITIONAL GENERAL EDUCATION

**6 credits**

- Econ. 211: Principles of Economics I 3 credits
- Econ. 212: Principles of Economics II 3 credits

## TYPICAL PROGRAM FOR BUSINESS ADMINISTRATION STUDENTS

| 1ST SEMESTER |      |                    |    | 2ND SEMESTER |      |                    |    |
|--------------|------|--------------------|----|--------------|------|--------------------|----|
| Eng.         | 111: | Fresh. Comp .....  | 3  | Bus.Ad.      | 152: | Manag. Acct. ....  | 3  |
| Bus.Ad.      | 151: | Fin. Acct. ....    | 3  | Math         | 132: | Math for Bus. &    |    |
| Math         | 131: | Math for Bus. &    |    |              |      | Econ. II .....     | 3  |
|              |      | Econ. I .....      | 3  | Bus.Ad.      | 102: | Computer Prin..... | 3  |
|              |      | Humanities .....   | 3  |              |      | Humanities .....   | 3  |
|              |      | Nat. Science ..... | 3  |              |      | Gen. Ed. Elec..... | 3  |
| HPE          | 111: | Health Ed. ....    | 2  |              |      | Phys. Ed. ....     | 1  |
|              |      |                    | 17 |              |      |                    | 16 |

### 3RD SEMESTER

|         |      |                |           |
|---------|------|----------------|-----------|
| Bus.Ad. | 240: | Legal Envir.   | 3         |
| Econ.   | 211: | Prin. I        | 3         |
| Econ.   | 221: | Econ. & Bus.   |           |
|         |      | Statistics I   | 3         |
|         |      | Humanities     | 3         |
|         |      | Gen. Ed. Elec. | 3         |
|         |      | Phys. Ed.      | 1         |
|         |      |                | <u>16</u> |

Note: Accounting majors will substitute Bus. Ad. 251: Intermediate Accounting for one of the above courses.

### 5TH SEMESTER

|         |      |               |           |
|---------|------|---------------|-----------|
| Bus.Ad. | 360: | Prin. of Mkt. | 3         |
| Bus.Ad. | 370: | Fin. Mgmt.    | 3         |
| Econ.   | 310: | Micro         | 3         |
|         |      | Bus. Major    | 3         |
|         |      | Soc. Sci.     | 3         |
|         |      |               | <u>15</u> |

### 7TH SEMESTER

|            |          |
|------------|----------|
| Bus. Major | 12       |
| Elec.      | <u>6</u> |
|            | 18       |

### 4TH SEMESTER

|         |      |                |           |
|---------|------|----------------|-----------|
| Bus.Ad. | 220: | Prin. of Mgmt. | 3         |
| Econ.   | 212: | Principles II  | 3         |
| Econ.   | 222: | Econ. & Bus.   |           |
|         |      | Statistics II  | 3         |
|         |      | Soc. Sci.      | 3         |
|         |      | Gen. Ed. Elec. | 3         |
|         |      | Phys. Ed.      | 1         |
|         |      |                | <u>16</u> |

Note: Accounting majors will substitute an advanced accounting course for one of the above courses.

### 6TH SEMESTER

|                |          |
|----------------|----------|
| Bus. Major     | 9        |
| Gen. Ed. Elec. | <u>6</u> |
|                | 15       |

### 8TH SEMESTER

|            |          |
|------------|----------|
| Bus. Major | 9        |
| Elec.      | <u>6</u> |
|            | 15       |

## LIBERAL ARTS AND SCIENCES

### OBJECTIVES AND CHARACTERISTICS

The undergraduate program in the arts and sciences at Clarion State College has two fundamental purposes:

1. To provide the student with a broad general education that will enable him to adapt to the complexities of the world in which he must live; that will give him an understanding and appreciation of the intellectual, cultural, and moral forces which have shaped our world; and that will engender in him critical perception, sound judgment, discipline, creativity, imagination, a sense of justice, and an appreciation of truth, goodness, and beauty.
2. To provide for the student a "major" field through which he acquires the experience of specialization and the background for further study, future employment, or the practice of a profession, especially medicine, dentistry, law, and medical technology (see below).

### ADMISSION AND FEES

See pages 31—33 and 39—45.

### SCHOLARSHIP REQUIREMENTS

See pages 34—37.

## PROGRAMS OF STUDY IN THE LIBERAL ARTS AND SCIENCES

Clarion State College offers a wide variety of programs of study in the liberal arts and sciences. All of them (with the exception of Medical Technology) require 48 semester credit-hours in General Education, details of which may be found on pages 51-52 of this catalog. The remaining 80 hours of the 128 required for graduation are given over to course work required for the major (and, in some instances, minor) and free electives. In addition, all B.A. programs require competency in a foreign language equivalent to second year, though there is no credit-hour specification and the student may meet the requirement by examination.

The following is a list of programs available in arts and sciences and the major requirements in each.

### DISCIPLINARY DEGREE PROGRAMS

#### ART, B.A. 57 credits

Required: Art 112, 113, 236, 237, 238, 239 and 24 credits in art chosen in consultation with a departmental advisor. In addition to these 42 credits of art, 15 credits representing each of the following fields are required: English (literature), music, philosophy, and speech communication and theater.

#### BIOLOGY, B.A. 53 credits

Required: Biol. 153, 154, 201, 202, 203 and 12 credits from approved biology electives. In addition to these 29 credits in biology, the following courses are required: Math 171; Chem. 153, 163, 154, 164, 254, 264; Phy. 251 and 252.

#### BIOLOGY, B.S.\* 64 credits

Required: Biol. 153, 154, 201, 202, 203 and 12 credits from approved biology electives. In addition to these 29 credits in biology, the following courses are required: Math 171; Chem. 153, 163, 154, 164, 254, 264; Phy. 251, 252; and 11 credits from the following fields: biology, chemistry, computer science, mathematics, physics. In some instances the student may be advised to substitute Chem. 151, 161, 152, 162, and Chem. 251, 252 for Chem. 153, 163, 154, 164, and Chem. 254 and 264. This is particularly true if the student plans to take additional chemistry beyond the minimum requirement.

#### CHEMISTRY, B.A. 61 credits

Required: Chem. 151, 161, 152, 162, 251, 252, 352, 354, 355, 356, 357, and 470. In addition to these 37 credits of chemistry, the following courses are required: Math. 171, 172, 271, 272; Phy. 251 or 258, and 252 or 259.

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\*A para-professional program in Medical Technology is listed on page 65.

Graduates who have met these requirements will be certified as having completed an approved program as determined by the Committee on Professional Training of the American Chemical Society. Chemistry majors planning to attend graduate school should elect advanced inorganic, organic, or physical chemistry. German is the recommended foreign language.

#### CHEMISTRY, B.S.†

73 credits

Required: Chem. 151, 161, 152, 162, 251, 252, 352, 354, 355, 356, 357, and 470. In addition to these 37 credits of chemistry, the following courses are required: Math. 171, 172, 271, 272; Phy. 251 or 258, and 252 or 259 plus 12 credits of approved science/math electives.

Graduates who have met these requirements will be certified as having completed an approved program as determined by the Committee on Professional Training of the American Chemical Society. Chemistry majors planning to attend graduate school should elect advanced inorganic, organic, or physical chemistry.

#### EARTH SCIENCE, B.A.

50 credits

Required: E.S. 252, 253, 258, 351; Geog. 352, 451; and 12 credits from approved earth science/geography electives. In addition to these 30 credits of earth science/geography, the following are required: Math. 171, 172 and 12 credits from the following fields: biology, chemistry, mathematics, and physics.

#### EARTH SCIENCE, B.S.

42 credits

Required: E.S. 252, 253, 258, 351; Geog. 130, 352, 451, 456; and 6 credits of earth science electives. In addition to these 30 credits of earth science/geography, 12 credits from the following fields are required: biology, chemistry, computer science, mathematics, and physics with the following courses recommended: Biol. 153, 154; Chem. 153, 154; Math 171, 172; and Phy. 251 and 252.

#### ECONOMICS, B.A.

51 credits

Required: Econ. 211, 212, and 24 credits chosen in consultation with a departmental advisor. In addition to these 30 credits of economics, the following courses are required: Hist. 111, 112, 213; P.S. 210, 211; Anth., Psy., or Soc. 211, and one additional course in anthropology, psychology, or sociology.

#### ENGLISH, B.A.

54 credits

Required: Eng. 221, 222; two of 320, 322, 385, 285; one of 252, 253, 457, 458; one of 401, 403, 411, 421, 426, 431; one of 332, 333, 441, 443; one other course in English literature; and 18 credits of English chosen in consultation with a departmental advisor. In addition to these 42 credits of English, 12 credits representing each of the following fields are required: art, music, philosophy, and speech communication and theater.

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†An inter-disciplinary degree in chemistry and business is listed on page 64.

- FRENCH, B.A.** 42 credits  
 Required: Fr. 251, 252, 255, 256, 351, and 15 additional credits from courses numbered above 252 excluding Fr. 300. In addition to these 30 credits of French, Eng. 252; and 9 additional credits in French, geography, and history, and/or Eng. 457 and 458, and/or other courses by advisement are required.
- GEOGRAPHY, B.A.** 57 credits  
 Required: E.S. 111; Geog. 130, 251, 257, 259, 354, 356, and 9 credits from among the following: Geog. 254, 355, 357, 452, 453, 454, and 459. In addition to these 30 credits of geography, the following courses are required: Econ. 211, 212; Hist. 111, 112, 213; P.S. 210, 211; Anth., Psy., or Soc. 211 and one additional course in anthropology, psychology, or sociology.
- GEOGRAPHY, B.S.** 42 credits  
 Required: E.S. 111; Geog. 130, 251, 259, 451, 455, 456, 459, and 6 additional credits in geography. In addition to these 30 credits in geography, 12 credits from the following fields are required: biology, chemistry, computer science, mathematics, and physics with the following courses recommended: C.S. 101, 102; and Math. 221.
- GEOGRAPHY (Planning Technology Emphasis), B.S.** 51 credits  
 Required: Geog. 259, 404, 406, 408, 410, 451, 456, 459; E.S. 412. In addition to these 27 credits in geography/earth science, the following courses are required: P.S. 375; Soc. 211, 363, 370; Econ. 211, 212, 414; and Math. 221.
- GERMAN, B.A.** 42 credits  
 Required: Ger. 251, 252, 255, 256, 351 and 15 additional credits from courses numbered above 252 excluding Ger. 257, 258, and 300. In addition to these 30 credits of German, Eng. 252, and 9 additional credits in German, geography, and history and/or Eng. 457 and 458, and/or other courses by advisement are required.
- HISTORY, B.A.** 36 credits  
 Required: Hist. 111, 112, 213 and 18 credits of history electives. In addition to these 27 credits of history, one course is required from each of the following fields: political science, economics, sociology/anthropology.
- MATHEMATICS, B.A.** 40 credits  
 Required: Math. 171, 172, 271, 272, 371, 372, 471, 472 and 12 credits of math electives in courses numbered 300 or above.
- MATHEMATICS (Applied Mathematics Option), B.S.** 46 credits  
 Required: Math. 171, 172, 271, 272 and 24 credits in math electives in courses numbered 300 and above. In addition to these 40 credits of mathematics, two second-level courses in the natural sciences from a list approved by the Mathematics Department are required.

**MATHEMATICS (Computer Science Emphasis Option), B.S.** 58 credits

Required: Math. 171, 172, 271, 272, 371, 372, 360, 370 and 12 credits in math electives. In addition to these 40 credits of mathematics, the following courses are required: C.S. 101, 102, 201, 301, one computer science elective, and Phil. 112, or Math. 369.

**MUSIC, B.A.** 39 credits

Required: Mus. 135, 136, 235, 236, 151, 152, 251, 252, 8 credits of applied music, and a music elective chosen in consultation with a departmental advisor. In addition, participation in a musical organization, without credit, is required for a minimum of eight semesters.

**PHILOSOPHY, B.A.** 42 credits

Required: Phil. 111, 212, 255, 256 and 15 credits of philosophy electives chosen in consultation with a departmental advisor, with Phil. 352 and 353 recommended. In addition to these 27 credits of philosophy, 15 credits from among the following fields are required: art, English, foreign language, music, speech, and theater.

**PHYSICS, B.A.** 60 credits

Required: Phy. 258, 278, 259, 269, 351, 361, 352, 362, 353, 363, 354, 364, 461 and 10 credits from the following: Phy. 355, 356, 357, 453, 455, and 460. In addition to these 38 credits in physics, the following courses are required: Math. 171, 172, 271, 272, 350; Chem. 153, and 163.

**PHYSICS, B.S.** 70 credits

Required: Phy. 258, 268, 249, 269, 351, 361, 352, 362, 353, 363, 354, 364, 461 and 11 credits from the following: Phy. 355, 356, 357, 453, 455, and 460. In addition to these 38 credits in physics, the following courses are required: Math. 171, 172, 271, 272, 350; Chem. 153, 163, and 9 other credits in the natural sciences and mathematics not including physics.

**POLITICAL SCIENCE, B.A.** 54 credits

Required: P.S. 210, 211, 353, 365, 366 and 15 credits of political science electives. In addition to these 30 credits in political science, the following courses are required: Econ. 211; Phil. 112; Soc. 311; and 12 credits from history, anthropology, or psychology.

**PSYCHOLOGY, B.A.** 54 credits

Required: Psy. 211, 230, 251 and 21 credits in psychology electives chosen in consultation with a departmental advisor. In addition to these 30 credits in psychology, 24 credits representing at least two of the following fields are required: anthropology, economics, geography, political science, and sociology. NOTE: Psy. 222 may not be counted, and only two of 260, 321, and 331 may be counted, toward a major in psychology.

**PSYCHOLOGY, B.S.** 54 credits

Required: Psy. 211, 230, 251 and 21 credits in psychology electives



chosen in consultation with a departmental advisor. In addition to these 30 credits in psychology, the following courses are required: Biol. 153, 201; Math 151 or equivalent; C.S. 101, 201; Phil. 112; and 5 credits from the following fields: biology, chemistry, computer science, earth science, mathematics, and physics. NOTE: Psy. 222 may not be counted, and only two of 260, 321, and 331 may be counted toward a major in psychology.

**SPANISH, B.A.** 42 credits

Required: Span. 251, 252, 255, 256, 351 and 15 additional credits from courses numbered above 252 excluding Span. 300. In addition to these 30 credits of Spanish, Eng. 252; and 9 additional credits in Iberian and/or Latin American geography and history, and/or Eng. 457 and 458 and/or other courses by advisement are required.

**SPEECH COMMUNICATION, B.A.\*** 36 credits

Required: 36 credits selected from the following courses: SCT 113, 114, 115, 200, 251, 252, 256, 257, 258, 264, 300, 311, 312, 354, 358, 411, 412, 453, 454, 465, 490, and 491.

**THEATER, B.A.\*** 39 credits

Required: SCT. 251, 255, 352, and 30 credits from the following courses: SCT 201, 251, 253, 254, 350, 351, 354, 359, 361, 362, 363, 455, 458, 465, 490, and 491.

## **INTER-DISCIPLINARY PROGRAMS**

**AREA MAJOR IN THE HUMANITIES, B.A.** 54 credits

Required: 54 credits from among the following fields: art, English (not including 110 or 111), foreign language (beyond the first year, music, philosophy, speech communication, and theater). Each of the fields must be represented by at least one course and a sufficient number of courses at the 300 or 400 levels must be elected to promote a scholarly interest in at least one field.

**AREA MAJOR IN THE NATURAL SCIENCES  
AND MATHEMATICS, B.A.** 54 credits

Required: 54 credits from among the fields of biology, chemistry, earth science, mathematics, and physics with each of the fields represented by one or more courses and a sufficient number of courses at the 300 or 400 level in one of them to promote a scholarly interest in the field.

**AREA MAJOR IN THE SOCIAL SCIENCES, B.A.** 54 credits

Required: Econ. 211, 212; Hist. 111, 112, 213; P.S. 210, 211; Anth., Psy., or Soc. 211, and one additional course in anthropology, psychology, or sociology. The remaining 27 credits must be distributed in such a way that among the 54 credit total, all of the following fields are represented: anthropology, economics, geography, history, political

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\*An inter-disciplinary program in Speech Communication and Theater is listed on page 64.

science, psychology, and sociology. The student must elect a sufficient number of courses on the 300 and 400 levels to promote a scholarly interest in at least one field.

**CHEMISTRY major with BUSINESS minor, B.S. 75 credits**

Required: Chem. 151, 161, 152, 162, 251, 252 and 7 credits of chemistry electives numbered 300 or above; Bus.Ad. 151, 360, 220, 102; Econ. 220 or Math 221 or 465; and 9 credits chosen from among the following: Bus.Ad. 152, 240, 253, 370, 471, 361, 460, 461, 463, 321, 420, 421, 424, 425; Econ. 310, 351, 340, and 361. In addition the following courses are required: Math. 171, 172, 271 or 132; Phy. 251, 252; Econ. 211, and 212.

**LANGUAGE AND AREA STUDIES PROGRAM**

This program is jointly offered by the departments of Modern Languages and Cultures, Economics, History, and Social Sciences. It is not a degree program but a combination of courses leading to a notation on the student's official record concomitant with a major in any one of the participating departments. The requirements are as follows: proficiency in a foreign language at the second-year level; 24 credits (not including first and second year language) in the following departments, with each department represented: Modern Languages and Cultures, Economics, Geography, History, Social Sciences.

**SOCIOLOGY-ANTHROPOLOGY, B.A. 45 credits**

Required: Soc. or Anth. 211 (Anth. mandatory for an emphasis in anthropology) and 21 credits in sociology and/or anthropology electives chosen in consultation with a departmental advisor. In addition to these 24 credits in sociology-anthropology, the following courses are required: Econ. 211, 212; Hist. 111, 112, 213; P.S. 210, and 211.

**SOCIOLOGY-PSYCHOLOGY, B.A. 54 credits**

Required: Soc. 211, 380, one of 351, 361 or 362, one of 352, 363 or 370 and two courses of sociology electives; Psy. 211, 230, 251 and three courses of approved psychology electives. In addition to these 36 credits in sociology and psychology, 18 credits must be selected representing at least two of the following fields: anthropology, economics, geography, political science.

**SPEECH COMMUNICATION AND THEATER, B.A. 36 credits**

Required: 12 credits from among SCT 113, 114, 115, 200, 251, 252, 256, 257, 258, 264, 300, 311, 312, 354, 358, 411, 412, 453, 454, 465, 490, 491; 12 credits from among SCT 201, 251, 253, 254, 255, 350, 351, 352, 354, 359, 361, 362, 363, 455, 458, 465, 490, 491; and 12 credits among Speech Communication and/or Theater electives.

## PRE-PROFESSIONAL AND PARA-PROFESSIONAL PROGRAMS AND PREPARATIONS

### LIBRARY SCIENCE

The liberal arts curriculum at Clarion State College does not include a program in library science but liberal arts students, regardless of their major may, by taking the following courses, qualify as provisional librarians under the Pennsylvania Public Library Code and they will have the prerequisites required to pursue a graduate degree in library science: L.S. 257, 258, 260, and 357. An additional 6 credits may be elected in consultation with the School of Library Science.

### MEDICAL TECHNOLOGY, B.S.

78 credits

The Medical Technology program includes an academic preparation of three years at Clarion and a 12-month course of training in a hospital laboratory. The following courses are required during the three years at Clarion: Biol. 153, 154, 201, 203, 341; Chem. 153, 163, 154, 164, 254, 264, 352; Phy. 251, 252; and Math. 171. Interested students should contact the med-tech advisor, Mrs. Donachy, for further information and assistance in planning their program.

### PRE-DENTAL STUDIES

There is no "pre-dent" degree program. The pre-dent student may major in any of the degree programs listed above but certain courses are recommended in any case. These are: Biol. 153 and one other, excluding botany; Chem. 151, 161, 152, 162, 251, 252; Eng., one year; Math., one year; Phy. 251, 252; and a foreign language. Interested students should contact the pre-dent advisor, Dr. Harmon, for additional information and guidance.

### PRE-LAW STUDIES

No particular course of study is required in preparation for law school. The pre-law student may major in any of the degree programs listed above but certain fields of study are recommended in any case; these are: English, political science, English and American constitutional history, philosophy, speech, accounting, corporate organization. In particular the following courses are recommended: P.S. 211, 354; Hist. 357; SCT 256, 311; Bus.Ad. 151. Interested students should contact the pre-law advisor, Dr. Bertsch of the Philosophy faculty, for additional information and guidance.

### PRE-MEDICAL STUDIES

There is no "pre-med" degree program. The pre-med student may major in any of the degree programs listed above but certain courses are recommended in any case. These are: Biol. 153 and one other, excluding botany; Chem. 151, 161, 152, 162, 251, 252; Eng., one year; Math., one year; Phy. 251, 252; and a foreign language. Interested students should contact the pre-med advisor, Dr. Harmon, for additional information and guidance.

## PRE-PROFESSIONAL STUDIES IN ENGINEERING

Since curricular requirements vary among engineering schools and fields of specialization, students planning to transfer to a school of engineering must give careful consideration to the requirements of the institutions to which they intend to apply and should plan to transfer no later than at the completion of their sophomore year. The following courses should be included in their programs at Clarion: Math. 171, 172, 271, 272, 350, 471; Chem. 153, 154, 163, 174; Phy. 251, and 252.

## PRE-PROFESSIONAL STUDIES IN PHARMACY

It is possible for a student to transfer to a school of pharmacy after the completion of either the freshman or sophomore year. In either case, he should carefully check the requirements of the school he wishes to enter. If the student plans two years of pre-pharmacy study at Clarion, he should include the following courses in his program: Biol. 153, 154; Chem. 151, 152, 161, 162, 251, 252; Math. 171, 172; Phy. 251 and 252. Interested students should contact the pre-pharmacy advisor, Dr. Beck of the Chemistry department, for additional information and assistance.

## PRE-PROFESSIONAL STUDIES IN VETERINARY MEDICINE

A minimum of two years of liberal arts education is usually required for entrance into a school of veterinary medicine. Three or four years are preferred. In general, the specific course requirements are the same as those of the medical school. Interested students may contact the pre-med advisor, Dr. Harmon, for assistance.

## PRE-THEOLOGICAL STUDIES

There is no fixed pattern of pre-seminary studies, but the American Association of Theological Schools recommends that students who are planning to enter a seminary should major in English, philosophy, or history.

## OTHER PROFESSIONAL FIELDS

Many universities offer graduate professional programs in business administration, social work, public administration, and other fields. These programs vary in length and confer specialized degrees upon completion. Graduates of Clarion State College with satisfactory records are eligible for admission into these programs. Specific undergraduate majors are usually not required. Students interested in any of these should contact the Dean of Arts and Sciences for assistance.

## TEACHER EDUCATION

Arts and Sciences students can make application for a teaching certificate by completing the requirements on one of the approved teacher education programs offered through the college. For further information, consult either the Dean of Arts and Sciences or of Professional Studies.

# TEACHER EDUCATION

## OBJECTIVES

Eight specialized curricula are offered in professional education: early childhood education, elementary education, library science, music education, public school nursing, secondary education, special education, and speech pathology and audiology. Each curriculum is designed to meet the graduation requirements of the college, the certification requirements of the state, and the accreditation requirements of various professional associations.

Each curriculum has its own particular objectives, and students are advised to explore these with their advisors. In broad terms, however, the several teacher education programs are designed to help each student grow in his ability to:

1. Articulate his thoughts and feelings with clarity, grace and force.
2. Engage in rigorous critical inquiry as he develops a conceptual system with which to understand himself and his world.
3. Define himself as a person and educator with regard to the moral, spiritual, and aesthetic values that condition his life commitments.
4. Acquire the necessary information, knowledge, and intellectual discipline needed to perform his professional tasks.
5. Develop the skills needed for specifying suitable learning goals, for diagnosing learner characteristics, for creating appropriate learning environments and experiences, and for evaluating learner growth and achievement.
6. Engage in inter-personal relationships that are facilitating for himself and for those with whom he works.
7. Give leadership to the field of education.

## CURRICULA

Students who enroll in one of the Teacher Education curricula may earn the degree of Bachelor of Science in Education with certification in the following:

**CURRICULUM IN EARLY CHILDHOOD EDUCATION** to prepare for teaching in the nursery, kindergarten, and primary grades.

**CURRICULUM IN ELEMENTARY EDUCATION** to prepare for teaching in the kindergarten, primary and intermediate grades.

**CURRICULUM IN LIBRARY SCIENCE EDUCATION** to prepare for service as school librarian.

**CURRICULUM IN MUSIC EDUCATION** to prepare for the teaching of music.

**CURRICULUM IN PUBLIC SCHOOL NURSING** to prepare registered nurses for service as school nurses.

**CURRICULUM IN SECONDARY EDUCATION** to prepare for teaching in secondary schools.

**CURRICULUM IN SPECIAL EDUCATION** to prepare for teaching the mentally retarded.

**CURRICULUM IN SPEECH PATHOLOGY AND AUDIOLOGY** to prepare specialists for service in speech correction to the speech and hearing handicapped and learning disabled.

Students in the above curricula may also take courses which will lead to certification in Safety Education or Environmental Education.

## **CERTIFICATION**

### **INSTRUCTIONAL I CERTIFICATE**

Students who complete one of the teacher education curricula of Clarion State College and who are awarded a baccalaureate degree are qualified for the Pennsylvania Instructional I Certificate, valid for three years of teaching. Application for the certificate must be made and the certificate issued before graduates may teach in the public schools of Pennsylvania.

### **THE PERMANENT COLLEGE OR INSTRUCTIONAL II CERTIFICATE**

The Permanent College or Instructional II Certificate requires three years of satisfactory teaching experience on the Instructional I Certificate in the public schools of this Commonwealth and the satisfactory completion of twenty-four (24) semester hours of post-baccalaureate education. Provisional certificates issued prior to July 1, 1969, are valid for three years of teaching or a period of 10 years, whichever comes first. These certificates may be made permanent upon the completion of three years of successful teaching on the certificate and the completion of six credits of post baccalaureate or graduate work if the certificate was issued prior to October 1, 1953; 12 credits if issued between October 1, 1953, and October 1, 1967; and 24 credits if issued between

October 1, 1967, and July 1, 1969. A provisional certificate which has not been made permanent within ten years from date of issue may be renewed for an additional period of ten years upon the completion of 12 semester hours of post baccalaureate or graduate work.

## **EXTENSION OF CERTIFICATES**

A certificate valid for the secondary school may be extended to include the elementary field upon completion of the approved program in the field of elementary education.

A certificate valid for the elementary school may be extended to include a secondary subject upon completion of the approved program in the secondary subject field.

## **STUDENTS NOT ENROLLED FOR B.S. IN ED.**

Students who are not enrolled in a program leading to a Bachelor of Science in Education degree can make application for teacher certification by completing one of the college's approved programs in teacher education. For further information, consult the Dean's Office, School of Professional Studies.

## **EVALUATION OF CREDITS**

Evaluations of credits for students are considered valid only for the year in which distributions are made (year in which credits are earned.) This situation exists because of changes in regulations governing the value of credits and in the requirements for certification and graduation frequently made by the Department of Education, the State Board of Education, and the Board of Presidents of the State Colleges. Students are urged to keep themselves well informed about their distributions by occasional inquiries at the Academic Office at times other than registration periods.

## **GENERAL REQUIREMENTS**

### **GENERAL EDUCATION**

To qualify for graduation, each student must satisfy the general education requirement of the college, which specifies the completion of 48 semester hours of credit in accord with the distribution presented on pages 51–52.

### **PROFESSIONAL EDUCATION**

Candidates for certification in a teaching field must

complete the professional requirements for that field, as indicated below.

Early Childhood Education, see page 74.

Elementary Education, see pages 73–74.

Library Science Education, see page 77.

Music Education, see page 92.

Public School Nursing, see page 95.

Secondary Education, see page 77.

Special Education, see page 97.

Speech Pathology and Audiology, see page 102.

## **AREAS OF SPECIALIZATION**

Secondary majors must complete the requirements for a field of certification as outlined in the section entitled Course Distributions. It should be noted that methods courses cannot be counted toward completion of an academic requirement.

Library Science majors will complete requirements for Library Science Certification and also a minimum of 18 semester hours in a second field.

## **STUDENT TEACHING**

Those who major in secondary education are assigned to student teaching upon completion of at least 80 credits and certain course requirements. Each secondary major will receive an assignment for a full day of student teaching throughout one semester at one of the public school student teaching centers cooperating with the college.

Secondary students majoring in Library Science are assigned to student teaching upon completion of at least 80 credits and specified course requirements. Two major assignments are required; the equivalent of one half semester in public school library practice and the equivalent of one half semester in classroom academic teaching at one of the public school teaching centers cooperating with the college.

Those who major in elementary education are assigned to student teaching upon completion of at least 80 credits and specified course requirements. Each elementary major will receive an assignment for a full day of student teaching throughout one semester at one of the public school elementary student teaching centers associated with the college. For elementary majors with the 18 semester hour concentration in Library Science, the semester's program in student teaching is divided into two student teaching assignments involving experience at one grade level and an elementary school library.



Student teachers will be assigned where they can be accommodated, without special consideration of their place of permanent residence.

Student teachers are encouraged to reside throughout the semester in the community in which their student teaching center is located.

All student teaching assignments follow the public school calendar rather than the college calendar each semester.

The final grade in student teaching will be recommended by the cooperating teacher in consultation with the College supervisor and will be finally approved and reported by the College supervisor.

Student teachers must meet college requirements prior to assignment.

Student teachers are assigned to centers where the most beneficial laboratory experience may be assured in keeping with the students' field of certification. The school districts, administrative units and other organizations which are now a part of the program, are listed below. The list should be considered as representative and advisory. It is not an agreement for assignment.

## **PUBLIC SCHOOL STUDENT TEACHING CENTERS**

Allegheny-Clarion Valley School District, Foxburg,  
Pennsylvania 16036

Ambridge Area School District, Ambridge, Pennsylvania  
15003

Apollo-Ridge School District, Apollo, Pennsylvania 15613

Armstrong School District, Box 351, Ford City, Pennsylvania 16226

Beaver County Easter Seal Society, Beaver, Pennsylvania 15009

Big Beaver Falls Area School District, Beaver Falls, Pennsylvania 15010

Bradford Area School District, Bradford, Pennsylvania 16701

Brockway Area School District, Brockway, Pennsylvania 15824

Brookville Area School District, Brookville, Pennsylvania 15825

Butler Area School District, Butler, Pennsylvania 16001

Cameron County School District, Emporium, Pennsylvania 15834

Carlynton School District, Carnegie, Pennsylvania 15106

Central Intermediate Unit, R. D. 1, Philipsburg Pennsylvania 16866

Churchill Area School District, Pittsburgh, Pennsylvania 15221

Clarion Area School District, Clarion, Pennsylvania 16214

Clarion Limestone Area School District, R. D. 1, Strattanville, Pennsylvania 16258

Clarion Manor Intermediate Unit, Clarion, Pennsylvania 16214

Clearfield Area School District, Clearfield, Pennsylvania 16830

Cranberry Area School District, Seneca, Pennsylvania 16346

Crawford Central School District, Meadville, Pennsylvania 16335

Cresson State School and Hospital, Cresson, Pennsylvania 16630  
 Curwensville Area School District, Curwensville, Pennsylvania 16833  
 Deer Lakes School District, Box 127, Russellton, Pennsylvania 15076  
 DuBois Area School District, DuBois, Pennsylvania 15801  
 Easter Seal Society for Crippled Children and Adults of Butler County, Inc., Butler, Pennsylvania 16001  
 Ebensburg State School and Hospital, Ebensburg, Pennsylvania 15931  
 Farrell Area School District, Farrell, Pennsylvania 16121  
 Forest Area School District, Tionesta, Pennsylvania 16353  
 Fox Chapel Area School District, Pittsburgh, Pennsylvania 15238  
 Franklin Area School District, Franklin, Pennsylvania 16323  
 Freeport Area School District, Freeport, Pennsylvania 16229  
 Glendale School District, R. D., Flinton, Pennsylvania 16640  
 Hampton Township School District, Allison Park, Pennsylvania 15101  
 Hempfield Area School District, R. D. 6, Greensburg, Pennsylvania 15601  
 Hickory Township School District, Sharon, Pennsylvania 16146  
 Highlands School District, Tarentum, Pennsylvania 15084  
 Johnsonburg Area School District, Johnsonburg, Pennsylvania 15845  
 Kane Area School District, Kane, Pennsylvania 16735  
 Karns City Area School District, Karns City, Pennsylvania 16041  
 Keystone School District, Knox, Pennsylvania 16232  
 Kiski Area School District, Vandergrift, Pennsylvania 15690  
 Lawrence County Society for Crippled Children and Adults, Inc., New Castle, Pennsylvania 16101  
 Leechburg Area School District, Leechburg, Pennsylvania 15656  
 Lenape Area Vocational-Technical School, Ford City, Pennsylvania 16226  
 Marion Center Area School District, Marion Center, Pennsylvania 15759  
 Mars Area School District, Mars, Pennsylvania 16046  
 McKeesport Area School District, McKeesport, Pennsylvania 15132  
 Meadville Area School District, Meadville, Pennsylvania 16335  
 Midwestern Intermediate Unit, Grove City, Pennsylvania 16127  
 Moniteau School District, R. D. 2, West Sunbury, Pennsylvania 16061  
 New Castle Area School District, New Castle, Pennsylvania 16101  
 New Kensington-Arnold School District, New Kensington, Pennsylvania 15068  
 North Allegheny School District, Pittsburgh, Pennsylvania 15237  
 North Clarion County Schools, Leeper, Pennsylvania 16233  
 Northgate School District, Pittsburgh, Pennsylvania 15202  
 North Hills School District, Pittsburgh, Pennsylvania 15229  
 Northwest Tri-County Intermediate Unit, Erie, Pennsylvania 16507  
 Norwin School District, R. D. 7, Irwin, Pennsylvania 15642  
 Oil City Area School District, Oil City, Pennsylvania 16301  
 Penn Hills School District, Pittsburgh, Pennsylvania 15235  
 Penn-Trafford School District, Harrison City, Pennsylvania 15636  
 Pittsburgh Public Schools, Pittsburgh, Pennsylvania 15213  
 Plum Borough School District, Pittsburgh, Pennsylvania 15239  
 Polk State School and Hospital, Polk, Pennsylvania 16342  
 Punxsutawney Area School District, Punxsutawney, Pennsylvania 15767

Quaker Valley School District, Sewickley, Pennsylvania 15143  
 Redbank Valley School District, New Bethlehem, Pennsylvania 16242  
 Ridgway Area School District, Ridgway, Pennsylvania 15853  
 Rochester Area School District, Rochester, Pennsylvania 15074  
 Sharon City School District, Sharon, Pennsylvania 16146  
 South Butler County School District, Saxonburg, Pennsylvania 16056  
 Southwest Butler County School District, R. D. 1, Harmony, Pennsylvania 16037  
 St. Marys Area School District, St. Marys, Pennsylvania 15857  
 St. Vincent Hospital, Erie, Pennsylvania 16512  
 Titusville Area School District, Titusville, Pennsylvania 16354  
 Union School District, Rimersburg, Pennsylvania 16248  
 Valley Grove School District, Franklin, Pennsylvania 16323  
 Warren County School District, Warren, Pennsylvania 16365  
 Western Area Branch Library, Pittsburgh, Pennsylvania 15229  
 Westmoreland Intermediate Unit, Greensburg, Pennsylvania 15601

## PROGRAM REQUIREMENTS ELEMENTARY EDUCATION

### GENERAL EDUCATION

The elementary major should fulfill the general education distribution requirements noted on pages 51–52.

### PROFESSIONAL COMPETENCY

The elementary major is expected to show competency in the following content areas through course work taken as free electives and in satisfying the general education requirement or through competency examinations: advanced English composition, art, biology, chemistry, civilization, English language, earth science, geography, health and physical education elementary activities, music, physics, political science, psychology, speech, and U. S. history.

### PROFESSIONAL EDUCATION

The following courses are required of all elementary majors:

|            |   | c.h. | s.h. |
|------------|---|------|------|
| Art 222    | Teaching Art in Elementary Grades . . . . .         | 3    | 3    |
| Ed. 329    | Audio-Visual Education . . . . .                    | 3    | 2    |
| El. Ed.110 | Introduction to Elementary Education . . . . .      | 4    | 3    |
| El. Ed.326 | Reading Problems in the Elementary School . . . . . | 3    | 3    |
| Mus. 132   | Literature and Materials of Music II E. . . . .     | 3    | 3    |
| Psy. 222   | Educational Psychology . . . . .                    | 3    | 3    |
| El. Ed.422 | Professional Practicum and School Law . . . . .     | 2    | 2    |
| El. Ed.424 | Student Teaching . . . . .                          | 30   | 12   |

NOTE: Students who elect a concentration in Library Science are required to take El. Ed. 423; Library Practice — 6 semester hours and El. Ed. 424; Elementary Student Teaching — 6 semester hours.

## PROFESSIONAL CORE

The professional core should be taken in the 5th or 6th semester; student teaching in the semester following:

|            |   | c.h. | s.h. |
|------------|---|------|------|
| El. Ed.323 | Teaching of Reading .....                       | 3    | 3    |
| El. Ed.324 | Teaching of Elementary School Mathematics ..... | 3    | 3    |
| El. Ed.325 | Modern Curriculum and Methods .....             | 5    | 5    |
| El. Ed.331 | Children's Literature .....                     | 3    | 3    |
| Sci.Ed.322 | Teaching Science in Elementary School .....     | 3    | 3    |

## TYPICAL PROGRAM FOR ELEMENTARY EDUCATION MAJORS

| 1st SEMESTER |      |                         |    | 2nd SEMESTER |                        |                        |    |
|--------------|------|-------------------------|----|--------------|------------------------|------------------------|----|
| Eng.         | 111  | or                      |    | El.Ed.       | 110:                   | Speech.....            | 3  |
|              | 113: | English Composition ..  | 3  |              | Intro. to El.Ed. ....  |                        | 3  |
| Math.        | 111: | Basic Mathematics ..... | 3  | HPE          | 111:                   | Health .....           | 2  |
|              |      | General Education ..... | 9  |              | General Education .... |                        | 9  |
|              |      | H.P.E. Activity .....   | 1  |              |                        |                        | 17 |
|              |      |                         | 16 |              |                        |                        |    |
| 3rd SEMESTER |      |                         |    | 4th SEMESTER |                        |                        |    |
| Psy.         | 111: | General Psy. ....       | 3  |              |                        | General Education ...  | 12 |
| HPE          | 223: | Physical Education....  | 1  |              |                        | Academic Elective .... | 6  |
|              |      | General Education ....  | 12 |              |                        |                        | 18 |
|              |      |                         | 16 |              |                        |                        |    |
| 5th SEMESTER |      |                         |    | 6th SEMESTER |                        |                        |    |
| Psych.       | 222  | Educ. Psych.....        | 3  | El. Ed.      | 323                    | Teaching Reading.....  | 3  |
| Ed.          | 329  | Audio-Visual .....      | 2  | El. Ed.      | 324                    | Teaching Math.....     | 3  |
| Art          | 222  | Teaching Art .....      | 3  | El. Ed.      | 325                    | Mod. Curr. ....        | 5  |
|              |      | Academic Elective.....  | 8  | El. Ed.      | 331                    | Children's Lit. ....   | 3  |
|              |      |                         | 16 | Sci. Ed.     | 322                    | Teaching Science ..... | 3  |
|              |      |                         |    |              |                        |                        | 17 |
| 7th SEMESTER |      |                         |    | 8th SEMESTER |                        |                        |    |
| El. Ed.      | 424  | Student Teaching.....   | 12 | El. Ed.      | 326                    | Reading Prob. ....     | 3  |
| El. Ed.      | 422  | Prof. Prac. & Sch.      |    |              |                        | General Education .... | 6  |
|              |      | Law .....               | 2  |              |                        | Academic Elective .... | 7  |
|              |      |                         | 14 |              |                        |                        | 16 |

## EARLY CHILDHOOD EDUCATION OPTION

Students admitted into the Early Childhood Education program will receive dual certification when graduated from the program and approved by the staff of the Department of Education. They will be eligible to receive the regular Elementary teaching certificate and the Early Childhood Education teaching certificate. Students who desire to be in the Early Childhood program must also be enrolled in the Elementary Education program. During the sophomore year, formal application is made to the staff of the Department of Education for acceptance into the program. Approximately 40 students will be chosen each year from among the applicants. The students selected must complete all of the general education requirements of the Elementary Education program, enroll in the primary sections of the Professional Core courses, and complete

a concentration of courses in Early Childhood Education. A list of courses or competencies in the concentrations will be available in the office of the Department of Education.

## **ELECTIVE CREDITS**

Elementary Education majors have a number of elective credits which they can use in several ways — to pursue areas of personal interest, to gain strength in selected academic areas, to enhance their professional competence, or to elect an area of academic concentration. Students who choose an academic concentration must have at least 18 semester hours of credit for a single subject concentration and 24 semester hours of credit for a broad area concentration. While students should consult with their advisors regarding elective credits, the following course distributions provide general guidelines for students who choose to elect an academic concentration.

## **ACADEMIC CONCENTRATIONS FOR ELEMENTARY MAJORS**

### **ART**

Required: Art 222, 231.

Electives: (12 sem. hrs.) Art 112, 113, 232, 233, 234, 235, 236, 237, 240, 300, 301, 311, 313, 315, 316.

### **BIOLOGY**

Required: Biol. 153, 154 or 111.

Electives: (12 to 15 hrs.) Biol. 202, 230, 351, 353, 354, 356, 357, 358.

### **CHEMISTRY/PHYSICS**

Required: Chem. 153 and 163 (lab), 154 and 164, 254 and 264, Physics 251, 252.

Ph. Sci. 111 and Ph. Sci. 112 should not be elected by students selecting this concentration.

### **EARLY CHILDHOOD EDUCATION**

Required: El. Ed. 231, 332.

Electives: (Choose one from each of the four areas) Psy. 215 or El. Ed. 321; Art 233, or 235 or 313; Soc. 351 or 352; Music 231 or 232, or 233.

### **ELEMENTARY SCHOOL LIBRARIANSHIP**

Required: L.S. 256, 257, 258, 357, 358, 359.

### **ENGLISH**

Required: Eng. 111 or 151; 253.

Electives: (12 sem. hrs.) Eng. 151, 170, 209, 210, 221, 222, 253, 320, 322, 353, 385, 457, 458.

### **EXCEPTIONAL CHILDREN AND YOUTH**

Required: Sp. Ed. 111, 220; SPA 455, 460.

Electives: (6 hrs.) By advisement.

### **FOREIGN LANGUAGE**

French, German, Russian, or Spanish:

Elementary I and II (151—152); Intermediate I and II (251—252);

Civilization I and II (255—256)

Students who have been exempted from 151—152 by virtue of previous study in high school will be required to have 6 hours of electives in their foreign language concentration.

## GEOGRAPHY

Required: E.S. 111; 254 or 257.

Electives: (12 hrs.) Two courses in topical Geography and two courses in regional Geography.

Suggested topical courses: Geog. 251, 254, 255, 259, 352, 354, 454.

Suggested regional courses: Geog. 256, 257, 355, 356, 357, 452, 453.

## GEOLOGY—GEOGRAPHY BROAD FIELD

Required: E.S. 111, 253, 258, 260, 351, 352, 353; Geog. 354

## HEALTH AND PHYSICAL EDUCATION

Required: HPE 112, 113, 210, 211, 224, 310, 313, 324.

Electives: (1 or 2 hours) HPE 325, 410, 413, 414.

## HISTORY

Required: Hist. 111, 112, 213.

Electives: (9 hours) By advisement.

## LIBRARY SCIENCE

See Curriculum in Library Science.

## MATHEMATICS

Required: Math 111.

Electives: (15 hours) Highly recommended electives are Math. 211, 212, 213, 214, 215. Other electives may be chosen by advisement.

## MUSIC

No specific courses are required for a Music concentration because of the differences in background and the differences in specific goals of the students who elect this concentration. The Department of Education has requested that all state colleges offering a concentration in Music develop a program which will meet the individual's needs and goals and at the same time will include, as far as possible, courses from five distinct areas of music. These five areas are:

1. Technical Courses (theory, etc.)
2. History and literature of music
3. Professional techniques
4. Applied music
5. Music organizations

## NATURAL SCIENCES BROAD FIELD

Required: Sci. 111, 112, Biol. 111, E.S. 111.

Electives: (9-12 hours) Biol. 202 or 351, Geog. 252, 351, 353.

## PHILOSOPHY

Required: Phil 211, 255, 256.

Electives: (9 hours) By advisement.

## POLITICAL SCIENCE

Required: P.S. 210, 211.

Electives: (12 hours) By advisement.

## PSYCHOLOGY

Required: Psy. 211, 222, and 331.

Electives: (9 hours) By advisement.

Recommended courses: Psy. 225, 230, 231, 355, 455, 456.

## READING EDUCATION

Required: El.Ed. 323, 326; Ed. 221, 224.

Electives: (6 hours) Art 234, 313; Ed. 332; HPE 310; Psy. 225, 331, 355;

Soc. 361, 362, 363; Sp.Ed. 210, 405; SCT 252, 455; SPA 450, 455.

## SPEECH COMMUNICATION AND THEATER

Required: SCT 113, 251, 354, 252, 455.

Electives: (By advisement 3-9 sem. hrs.)

## SOCIAL STUDIES BROAD FIELD

Required: Econ. 211; Hist. 111, 112, 213; Pol. Sci. 210, 211; Soc. 211.

Electives: (3 semester hours)

## SOCIOLOGY-ANTHROPOLOGY BROAD FIELD

Required: Soc. 211; Anth. 211.

Electives: (18 semester hours)

## SECONDARY EDUCATION

### General Education

Secondary education students fulfill the general education requirement by following the distribution noted on pages 51–52. However, within certain majors there may be slight deviations from the pattern presented on page 52 and a secondary student should check with the departmental office of the discipline in which he is majoring to ascertain any variations.

### Professional Education

The following courses are required of all secondary education and Library Science majors:

|      |     |   | c.h. | s.h. |
|------|-----|---|------|------|
| Ed.  | 223 | Social Foundations of Education .....                                       | 3    | 3    |
|      |     | Select course in Methods and Evaluation in field<br>of Specialization ..... | 3    | 3    |
| Ed.  | 329 | Audio-Visual Communication .....  | 3    | 2    |
| Psy. | 222 | Educational Psychology .....  | 3    | 3    |
| Psy. | 322 | Developmental Psychology .....  | 3    | 3    |
| Ed.  | 422 | Professional Practicum Including School Law .....                           | 2    | 2    |
| Ed.  | 424 | Secondary Student Teaching .....  | 30   | 12   |

### NOTE: LIBRARY SCIENCE MAJORS

All professional courses listed above are requirements for Library Science majors except Ed. 329, 422, and 424, for which the following are substituted:

|       |     |                                  | c.h. | s.h. |
|-------|-----|----------------------------------|------|------|
| Comm. | 240 | Locally Produced Materials ..... | 3    | 3    |
| Ed.   | 423 | Library Practice .....           | 15   | 6    |
| Ed.   | 424 | Secondary Student Teaching.....  | 15   | 6    |

### TYPICAL PROGRAM FOR SECONDARY EDUCATION MAJORS

| 1ST SEMESTER |      |                                | 2ND SEMESTER |      |                            |
|--------------|------|--------------------------------|--------------|------|----------------------------|
| Eng.         | 111: | English Composition ..3        | SCT.         | 113: | Speech Fundamentals.3      |
|              |      | Math, Logic, or                |              |      | General Education .....7   |
|              |      | Comp. Sci. ....3               |              |      | Major Field or Elect. ...6 |
| HPE          | 111: | Health .....2                  |              |      | Phys. Ed. Activity .....1  |
|              |      | General Education .....9       |              |      | <u>17</u>                  |
|              |      | <u>17</u>                      |              |      |                            |
| 3RD SEMESTER |      |                                | 4TH SEMESTER |      |                            |
| Psy.         | 211  | General Psy. ....3             | Psy.         | 222: | Educational Psy. ....3     |
|              |      | General Education ....6        |              |      | General Education ....6    |
|              |      | Major Field or Elect. 6        |              |      | Major Field or Elect. 6    |
|              |      | Phys. Ed. Activity <u>1</u>    |              |      | <u>15</u>                  |
|              |      | <u>16</u>                      |              |      |                            |
| 5TH SEMESTER |      |                                | 6TH SEMESTER |      |                            |
|              |      | General Education .....3       | Ed.          | 223: | Social Foundations ....3   |
|              |      | Major Field or Elect <u>12</u> | Ed.          | 329: | Audio-Visual Com. ....2    |
|              |      | <u>15</u>                      |              |      | Methods Course .....3      |
|              |      |                                | Psy.         | 322: | Developmental Psy. ...3    |
|              |      |                                |              |      | Major Field or Elect. 6    |
|              |      |                                |              |      | <u>17</u>                  |

## 7TH SEMESTER

General Education ..... 3

Major Field or Elect. 1518

Ed.

Ed.

## 8TH SEMESTER

422: Prof. Prac. &amp; Sch. Law 2

424: Student Teaching 1214

## SECONDARY CERTIFICATION SPECIALIZATION

Secondary education majors may choose areas of specialization from the approved programs below. Curriculum requirements are noted for each area of specialization.

## BIOLOGY — 50 Semester Hours

| REQUIRED:                  |     |   | c.h. | s.h. |
|----------------------------|-----|---|------|------|
| Biol.                      | 153 | Introductory Animal Biology .....       | 6    | 4    |
| Biol.                      | 154 | Introductory Plant Biology .....        | 6    | 4    |
| Biol.                      | 201 | Genetics .....                          | 5    | 3    |
| Biol.                      | 202 | Environmental Biology .....             | 5    | 3    |
| Biol.                      | 203 | Cell Biology .....                      | 5    | 3    |
| Chem.                      | 153 | General Chemistry I .....               | 6    | 4    |
| Chem.                      | 154 | General Chemistry II .....              | 6    | 4    |
| Chem.                      | 254 | Introductory Organic Chemistry .....    | 6    | 4    |
| Ed.                        | 332 | Biomethods .....                        | 3    | 3    |
| Math.                      | 171 | Precalculus .....                       | 4    | 4    |
| Phy.                       | 251 | General Physics I .....                 | 6    | 4    |
| Phy.                       | 252 | General Physics II .....                | 6    | 4    |
| ELECTIVE: (Three required) |     |   |      |      |
| Biol.                      | 204 | Developmental Biology .....             | 5    | 3    |
| Biol.                      | 341 | General Microbiology .....              | 8    | 4    |
| Biol.                      | 351 | Field Botany .....                      | 5    | 3    |
| Biol.                      | 352 | Taxonomy of Vascular Plants .....       | 5    | 3    |
| Biol.                      | 353 | Ornithology .....                       | 5    | 3    |
| Biol.                      | 354 | Entomology .....                        | 5    | 3    |
| Biol.                      | 356 | Field Zoology — Invertebrate .....      | 5    | 3    |
| Biol.                      | 357 | Field Zoology — Vertebrate .....        | 5    | 3    |
| Biol.                      | 360 | Problems in Biology .....               |      | 1-4  |
| Biol.                      | 400 | Special Topics .....                    | 2    | 2    |
| Biol.                      | 401 | Radiation Biology .....                 | 5    | 3    |
| Biol.                      | 425 | Fisheries Biology .....                 | 5    | 3    |
| Biol.                      | 442 | Microbial Physiology .....              | 6    | 4    |
| Biol.                      | 444 | Immunology .....                        | 6    | 4    |
| Biol.                      | 451 | Animal Physiology .....                 | 5    | 3    |
| Biol.                      | 452 | Plant Physiology .....                  | 5    | 3    |
| Biol.                      | 460 | Comparative Vertebrate Morphology ..... | 5    | 3    |
| Biol.                      | 461 | Vertebrate Embryology .....             | 5    | 3    |
| Biol.                      | 462 | Histology .....                         | 5    | 3    |
| Biol.                      | 470 | Animal Ecology .....                    | 5    | 3    |
| Biol.                      | 471 | Plant Ecology .....                     | 5    | 3    |
| Biol.                      | 472 | Parasitology .....                      | 5    | 3    |
| Biol.                      | 490 | Evolution .....                         | 3    | 3    |
| Chem.                      | 453 | Biochemistry .....                      | 6    | 4    |



Mathematics 151 and 152 may be substituted for 171. In meeting general education requirements (see pages 51–52), the distribution in Natural Sciences and Mathematics may be met with supplemental courses from the field of specialization. Students should note that no more than one non-laboratory elective may be included in credits for the major.

## CHEMISTRY – 28 Semester Hours

| Required:                       |     |                            | c.h. | s.h. |
|---------------------------------|-----|----------------------------|------|------|
| Chem.                           | 151 | Chemical Principles I      | 4    | 4    |
| *Chem.                          | 161 | Chemical Principles Lab I  | 3    | 1    |
| Chem.                           | 152 | Chemical Principles II     | 4    | 4    |
| *Chem.                          | 162 | Chemical Principles Lab II | 3    | 1    |
| Chem.                           | 251 | Organic Chemistry I        | 6    | 4    |
| Chem.                           | 252 | Organic Chemistry II       | 9    | 5    |
| Electives numbered 300 or above |     |                            |      | 9    |

### Elective:

|       |          |                                 |   |     |
|-------|----------|---------------------------------|---|-----|
| Chem. | 211      | Science and Society             | 3 | 3   |
| Chem. | 255      | Industrial Chemistry            | 5 | 3   |
| Chem. | 352      | Techniques and Instruments I    | 8 | 4   |
| Chem. | 354      | Physical Chemistry I            | 3 | 3   |
| Chem. | 355      | Physical Chemistry II           | 3 | 3   |
| Chem. | 356      | Techniques and Instruments II   | 6 | 2   |
| Chem. | 357      | Techniques and Instruments III  | 5 | 3   |
| Chem. | 359      | Advanced Organic Chemistry      | 3 | 3   |
| Chem. | 453      | Biochemistry                    | 6 | 4   |
| Chem. | 455      | Advanced Physical Chemistry     | 3 | 3   |
| Chem. | 456      | Advanced Inorganic Chemistry    | 3 | 3   |
| Chem. | 459      | Demonstrations in Chemistry     | 5 | 3   |
| Chem. | 460      | Radiochemistry Techniques       | 4 | 2   |
| Chem. | 461      | Techniques and Instruments IV   | 4 | 2   |
| Chem. | 465, 466 | Chemical Research               |   | 1-3 |
| Chem. | 470      | Chemical Literature and Seminar | 1 | 1   |
| Chem. | 471      | Special Topics in Chemistry     | 3 | 3   |
| Chem. | 485      | Problems in Chemical Education  |   | 1-3 |
| Phy.  | 353/363  | Atomic Physics                  | 6 | 4   |

### Additional Requirements:

|      |     |                                      |   |   |
|------|-----|--------------------------------------|---|---|
| Math | 171 | Precalculus                          | 4 | 4 |
| Math | 172 | Calculus with Analytical Geometry I  | 4 | 4 |
| Math | 271 | Calculus with Analytical Geometry II | 4 | 4 |
|      |     | and either                           |   |   |
| Phy. | 251 | General Physics I                    | 6 | 4 |
| Phy. | 252 | General Physics II                   | 6 | 4 |
|      |     | or                                   |   |   |
| Phy. | 258 | Introductory Physics Lecture I       | 5 | 4 |

\*These laboratories must be taken concurrently with the lecture course.

|      |     |                                    |   |   |
|------|-----|------------------------------------|---|---|
| Phy. | 268 | Introductory Physics Laboratory I  | 3 | 1 |
| Phy. | 259 | Introductory Physics Lecture II    | 5 | 4 |
| Phy. | 269 | Introductory Physics Laboratory II | 3 | 1 |

Students who have taken Chemistry 153 and Chemistry 154 may be permitted, upon consideration of their performance, to substitute these courses for Chemistry 151 and Chemistry 152. A total of 28 semester hours in chemistry must still be taken.

## COMMUNICATION ARTS

The Communication Arts program represents a new concept in the preparation of prospective teachers of communication-related subjects. It is designed to equip the teacher with the ability to help students make meaning out of their experience through the uses of language and all those behaviors, verbal and nonverbal, associated with the uses of language. The candidate may develop a program that meets his special needs and interests as a potential teacher of English, speech, drama, and other communication subjects. Successful completion of the program leads to the communication certificate.

| CORE:        |               |                                      | c.h. | s.h. |
|--------------|---------------|--------------------------------------|------|------|
| Eng.         | 151:          | Composition and Literature           | 3    | 3    |
| Eng.         | 170:          | The Literary Experience              | 3    | 3    |
| Eng.         | 209:          | Special Topics in Literature         | 3    | 3    |
| or           |               |                                      |      |      |
| Eng.         | 210:          | The Modes of Literature              | 3    | 3    |
| Eng.         | 221 or 222:   | English Literature Survey            | 3    | 3    |
| Eng.         | 252:          | Introduction to the English Language | 3    | 3    |
| SCT          | 200:          | Communication Theory and Processes   | 3    | 3    |
| SCT          | 120 or 354:   | Oral Interpretation or Theater       |      |      |
|              |               | Play Production                      | 3    | 3    |
| SCT Elective | (Non-Theater) |                                      | 3    | 3    |

## CONCENTRATION:

The student may elect to concentrate in any of the following areas by taking 18 credits in 1 or 9 credits from each of 2: Speech Communication, Composition, Literature, Theater, or Linguistic Sciences. Courses for the concentration must be chosen in consultation with the student's advisor and with the approval of the Communication Council.

## GENERAL SCIENCE — 42 Semester Hours

A program specifically designed to prepare students to teach science at the junior high or middle school level. General Science majors are not prepared to teach specialized high school courses such as biology, chemistry, physics, or earth science. Likewise, a Biology, Chemistry, or Physics major is not prepared to teach General Science unless his college program is

broadened to include all of the required science courses of the General Science curriculum. A student who desires to teach only specialized courses should major in the specific subject area.

| REQUIRED: |     |                                       | c.h. | s.h. |
|-----------|-----|---------------------------------------|------|------|
| Biol.     | 153 | Introductory Animal Biology .....     | 6    | 4    |
| Biol.     | 154 | Introductory Plant Biology .....      | 6    | 4    |
| Chem.     | 153 | General Chemistry I .....             | 6    | 4    |
| Chem.     | 163 | General Chemistry Laboratory I .....  | 3    | 1    |
| Chem.     | 154 | General Chemistry II .....            | 6    | 4    |
| Chem.     | 164 | General Chemistry Laboratory II ..... | 3    | 1    |
| *Phy.     | 251 | General Physics I .....               | 6    | 4    |
| *Phy.     | 252 | General Physics II .....              | 6    | 4    |
| E.S.      | 252 | Physical Geology .....                | 3    | 3    |
| E.S.      | 351 | Meteorology .....                     | 3    | 3    |
| E.S.      | 353 | Descriptive Astronomy .....           | 3    | 3    |

Three (3) additional science courses will be needed to give a minimum of 42 credits. Students, with advisement, may elect courses from one field only, or courses may be distributed among biology, chemistry, or physics.

\*Mathematics 171 is a prerequisite. Mathematics 151 and 152 may not be substituted for 171. Majors in General Science should not include Biology 111, Mathematics 112, Physical Science 111 and 112, and Earth Science 111 in their general education programs (see pages 51–52).

Since General Science is an interdisciplinary major, students must maintain a quality point average of 2.00 in each of the fields, physics, chemistry, biology, and earth science.

A Biology, Chemistry, or Physics major may receive provisional certification in General Science only if his program of courses has included, satisfactorily, all the basic courses in the General Science curriculum.

## EARTH AND SPACE SCIENCE — 48 Semester Hours

| REQUIRED:                   |     |                                   | c.h. | s.h.     |
|-----------------------------|-----|-----------------------------------|------|----------|
| E.S.                        | 111 | Basic Earth Science .....         | 3    | 3        |
| E.S.                        | 252 | Physical Geology .....            | 3    | 3        |
| E.S.                        | 258 | Historical Geology .....          | 3    | 3        |
| E.S.                        | 351 | Meteorology .....                 | 3    | 3        |
| E.S.                        | 353 | Descriptive Astronomy .....       | 3    | 3        |
| Electives (See below) ..... |     |                                   | 6    |          |
|                             |     |                                   |      | <hr/> 21 |
| Biol.                       | 153 | Introductory Animal Biology ..... | 6    | 4        |
| Biol.                       | 154 | Introductory Plant Biology .....  | 6    | 4        |

|                          |     |                          |       |              |
|--------------------------|-----|--------------------------|-------|--------------|
| Chem.                    | 153 | General Chemistry I      | 3     | 3            |
| Chem.                    | 163 | General Chemistry Lab I  | 3     | 1            |
| Chem.                    | 154 | General Chemistry II     | 3     | 3            |
| Chem.                    | 164 | General Chemistry Lab II | 3     | 1            |
| Phy.                     | 251 | General Physics I        | 6     | 4            |
| Phy.                     | 252 | General Physics II       | 6     | 4            |
| Natural Science Elective |     |                          |       | <u>3-4</u>   |
|                          |     |                          |       | <u>27-28</u> |
|                          |     |                          | Total | 48-49        |

#### ELECTIVE:

|  |     |                             |   |   |
|--|-----|-----------------------------|---|---|
| E.S.   | 253 | Land Forms                  | 3 | 3 |
| Geog.  | 259 | Map Interpretation          | 3 | 3 |
| E.S.   | 260 | Minerals                    | 3 | 3 |
| E.S.   | 261 | Rocks                       | 3 | 3 |
| Geog.  | 352 | Climatology                 | 3 | 3 |
| Geog.  | 451 | Cartography I               | 5 | 3 |
| Geog.  | 455 | Cartography II              | 5 | 3 |
| Geog.  | 456 | Aerial Photo Interpretation | 4 | 3 |
| Science electives from Biology, Chemistry and Physics. |     |                             |   |   |

In satisfying the general education distribution (see pages 51–52), it is recommended that Earth and Space majors schedule Mathematics 171.

### ENGLISH – 42 Semester Hours

| REQUIRED: |     |                                       | c.h. | s.h. |
|-----------|-----|---------------------------------------|------|------|
| Eng.      | 111 | Freshman Composition                  | 3    | 3    |
| Sp.       | 113 | Fundamentals of Speech                | 3    | 3    |
| Eng.      | 170 | The Literary Experience               | 3    | 3    |
| Eng.      | 201 | Advanced Composition                  | 3    | 3    |
| Eng.      | 221 | English Literature, Beginnings – 1800 | 3    | 3    |
| or        |     |                                       |      |      |
| Eng.      | 222 | English Literature 1800 – Present     | 3    | 3    |
| Eng.      | 252 | Introduction to the English Language  | 3    | 3    |
| or        |     |                                       |      |      |
| Eng.      | 253 | English Grammar and Usage             | 3    | 3    |

#### ELECTIVES:

|      |     |  |   |   |
|------|-----|--|---|---|
| Eng. | 209 | Special Topics in Literature           | 3 | 3 |
| Eng. | 210 | The Modes of Literature                | 3 | 3 |
| Eng. | 241 | Beginning Creative Writing             | 3 | 3 |
| Eng. | 251 | Business Writing                       | 3 | 3 |
| Eng. | 252 | Introduction to the English Language   | 3 | 3 |
| Eng. | 253 | English Grammar and Usage              | 3 | 3 |
| Eng. | 281 | Basic Professional Writing             | 3 | 3 |
| Eng. | 285 | Contemporary Black American Literature |   |   |
|      |     | 1910 – present                         | 3 | 3 |
| Eng. | 291 | Short Fiction of the 20th Century      | 3 | 3 |

|      |     |  |   |   |
|------|-----|--|---|---|
| Eng. | 312 | Modern Drama                               | 3 | 3 |
| Eng. | 320 | Studies in 19th Century American Fiction   | 3 | 3 |
| Eng. | 322 | Studies in 20th Century American Fiction   | 3 | 3 |
| Eng. | 332 | Nineteenth Century British Novel           | 3 | 3 |
| Eng. | 333 | Twentieth Century British Novel            | 3 | 3 |
| Eng. | 351 | Advanced Professional Writing              | 3 | 3 |
| Eng. | 353 | Twentieth Century Poetry                   | 3 | 3 |
| Eng. | 360 | The Craft of Fiction                       | 3 | 3 |
| Eng. | 361 | The Craft of Poetry                        | 3 | 3 |
| Eng. | 385 | American Poetry to 1900                    | 3 | 3 |
| Eng. | 401 | Medieval Literature                        | 3 | 3 |
| Eng. | 403 | Sixteenth Century Prose and Poetry         | 3 | 3 |
| Eng. | 411 | Shakespeare                                | 3 | 3 |
| Eng. | 421 | Studies in 17th Century English Literature | 3 | 3 |
| Eng. | 426 | Studies in 18th Century English Literature | 3 | 3 |
| Eng. | 431 | English Drama                              | 3 | 3 |
| Eng. | 441 | English Romantic Literature (1789–1832)    | 3 | 3 |
| Eng. | 443 | Studies in 19th Century English Literature | 3 | 3 |
| Eng. | 455 | Criticism                                  | 3 | 3 |
| Eng. | 456 | English Honors Seminar                     | 3 | 3 |
| Eng. | 457 | Descriptive Linguistics                    | 3 | 3 |
| Eng. | 458 | Linguistic History of the English Language | 3 | 3 |
| Eng. | 461 | Writers' Workshop                          | 3 | 3 |

## **FRENCH — 30 Semester Hours, excluding French 151 and 152**

### **REQUIRED:** c.h. s.h.

|      |     |                                |   |   |
|------|-----|--------------------------------|---|---|
| *Fr. | 251 | Intermediate French I          | 3 | 3 |
| *Fr. | 252 | Intermediate French II         | 3 | 3 |
| Fr.  | 255 | French Civilization I          | 3 | 3 |
| Fr.  | 256 | French Civilization II         | 3 | 3 |
| Fr.  | 351 | Advanced Grammar & Composition | 3 | 3 |

### **ELECTIVE:**

|     |     |   |   |   |
|-----|-----|---|---|---|
| Fr. | 260 | The French Short Story                      | 3 | 3 |
| Fr. | 353 | The Modern French Drama                     | 3 | 3 |
| Fr. | 354 | The Modern French Novel                     | 3 | 3 |
| Fr. | 355 | French Romanticism                          | 3 | 3 |
| Fr. | 356 | French Poetry from Baudelaire to Surrealism | 3 | 3 |
| Fr. | 357 | The French Realistic Novel                  | 3 | 3 |
| Fr. | 358 | The Literature of the Age of Enlightenment  | 3 | 3 |
| Fr. | 359 | The Literature of the Classical Age         | 3 | 3 |
| Fr. | 451 | Supervised Readings in French Literature    | 3 | 3 |

Students participating in foreign study programs must complete at least six hours of French literature at Clarion State College, regardless of the number of credits earned abroad.

\*May be omitted upon demonstration of proficiency at second year level.

## GERMAN — 30 Semester Hours, excluding German 151 and 152.

| REQUIRED: |     |                                      | c.h. | s.h. |
|-----------|-----|--------------------------------------|------|------|
| *Ger.     | 251 | Intermediate German I .....          | 3    | 3    |
| *Ger.     | 252 | Intermediate German II .....         | 3    | 3    |
| Ger.      | 255 | Germanic Civilization I .....        | 3    | 3    |
| Ger.      | 256 | Germanic Civilization II .....       | 3    | 3    |
| Ger.      | 351 | Advanced Grammar & Composition ..... | 3    | 3    |

### ELECTIVE:

|      |     |  |   |   |
|------|-----|--|---|---|
| Ger. | 253 | Scientific German .....  | 3 | 3 |
| Ger. | 350 | Advanced Conversation and Interpretation .....                   | 3 | 3 |
| Ger. | 352 | Survey of German Literature through the<br>Classical Age .....   | 3 | 3 |
| Ger. | 353 | The Modern German Drama .....                                    | 3 | 3 |
| Ger. | 354 | The Modern German Novel .....                                    | 3 | 3 |
| Ger. | 355 | German Romanticism .....   | 3 | 3 |
| Ger. | 358 | Classical German Literature: Goethe,<br>Schiller & Lessing ..... | 3 | 3 |
| Ger. | 360 | Contemporary German Prose .....                                  | 3 | 3 |
| Ger. | 361 | German Lyric Poetry .....  | 3 | 3 |
| Ger. | 451 | Supervised Readings in German Literature .....                   | 3 | 3 |

Students participating in foreign study programs must complete at least six hours of German literature at Clarion State College, regardless of the number of credits earned abroad.

\*May be omitted upon demonstration of proficiency at second year level.

## MATHEMATICS — 34 Semester Hours

| REQUIRED: |     |   | c.h. | s.h. |
|-----------|-----|---|------|------|
| Math.     | 171 | Precalculus .....                         | 4    | 4    |
| Math.     | 172 | Calculus with Analytic Geometry I .....   | 4    | 4    |
| Math.     | 271 | Calculus with Analytic Geometry II .....  | 4    | 4    |
| Math.     | 272 | Calculus with Analytic Geometry III ..... | 4    | 4    |
| Math.     | 371 | Modern Algebra I .....                    | 3    | 3    |
| Math.     | 372 | Modern Algebra II .....                   | 3    | 3    |

### ELECTIVE:

|       |     |   |   |   |
|-------|-----|---|---|---|
| Math. | 350 | Ordinary Differential Equations .....     | 3 | 3 |
| Math. | 352 | Probability .....                         | 3 | 3 |
| Math. | 355 | History of Mathematics .....              | 3 | 3 |
| Math. | 357 | Modern Geometry .....                     | 3 | 3 |
| Math. | 360 | Numerical Methods in Mathematics I .....  | 3 | 3 |
| Math. | 361 | Numerical Methods in Mathematics II ..... | 3 | 3 |
| Math. | 370 | Introduction to Linear Algebra .....      | 3 | 3 |
| Math. | 454 | Theory of Numbers .....                   | 3 | 3 |
| Math. | 456 | Mathematical Statistics .....             | 3 | 3 |
| Math. | 471 | Advanced Calculus I .....                 | 3 | 3 |

|       |     |                      |     |     |
|-------|-----|----------------------|-----|-----|
| Math. | 472 | Advanced Calculus II | 3   | 3   |
| Math. | 473 | Elementary Topology  | 3   | 3   |
| Math. | 480 | Topics               | 3   | 3   |
| Math. | 499 | Independent Study    | 1-3 | 1-3 |

Majors are encouraged to select Physics 258 and/or Chemistry 151 or 153 instead of Basic Physical Science 111–112. A second certification in physics is available.

A Secondary Education major electing Mathematics as a minor field must complete Mathematics 171, 172, 271, 272, 371.

## PHYSICS — 38 Semester Hours

### REQUIRED: c.h. s.h.

|       |     |                                    |   |   |
|-------|-----|------------------------------------|---|---|
| Phy.  | 258 | Introductory Physics Lecture I     | 5 | 4 |
| *Phy. | 268 | Introductory Physics Laboratory I  | 3 | 1 |
| Phy.  | 259 | Introductory Physics Lecture II    | 5 | 4 |
| *Phy. | 269 | Introductory Physics Laboratory II | 3 | 1 |
| Phy.  | 351 | Mechanics                          | 3 | 3 |
| *Phy. | 361 | Mechanics Laboratory               | 3 | 1 |
| Phy.  | 352 | Electricity and Magnetism          | 3 | 3 |
| *Phy. | 362 | Electrical Measurements Laboratory | 3 | 1 |
| Phy.  | 353 | Atomic Physics                     | 3 | 3 |
| *Phy. | 363 | Atomic Laboratory                  | 3 | 1 |
| Phy.  | 354 | Optics                             | 3 | 3 |
| *Phy. | 364 | Optical Laboratory                 | 3 | 1 |

### ELECTIVE:

|      |     |                                     |   |   |
|------|-----|-------------------------------------|---|---|
| Phy. | 355 | Nuclear Physics                     | 6 | 4 |
| Phy. | 356 | Heat                                | 3 | 3 |
| Phy. | 357 | Intro. to Theory of the Solid State | 3 | 3 |
| Phy. | 453 | Physical Measurements               | 5 | 3 |
| Phy. | 455 | Electronics                         | 5 | 3 |
| Phy. | 457 | Demonstrations in Physics           | 5 | 3 |
| Phy. | 460 | Intro. to Math. Physics             | 3 | 3 |
| Phy. | 461 | Seminar                             | 1 | 1 |

### ADDITIONAL REQUIREMENTS:

|        |     |                                     |   |   |
|--------|-----|-------------------------------------|---|---|
| Chem.  | 153 | General Chemistry I                 | 3 | 3 |
| *Chem. | 163 | General Chemistry Laboratory I      | 3 | 1 |
| Chem.  | 154 | General Chemistry II                | 3 | 3 |
| *Chem. | 164 | General Chemistry Laboratory II     | 3 | 1 |
| Math.  | 171 | College Algebra and Trigonometry    | 4 | 4 |
| Math.  | 172 | Calculus With Analytic Geometry I   | 4 | 4 |
| Math.  | 271 | Calculus With Analytic Geometry II  | 4 | 4 |
| Math.  | 272 | Calculus With Analytic Geometry III | 4 | 4 |
| Math.  | 350 | Ordinary Differential Equations     | 3 | 3 |

\*These laboratories must be taken concurrently with the lecture course.

## SOCIAL STUDIES — 54 Semester Hours

The major distribution of 54 semester hours consists of 36 semester hours of required courses and an 18 semester hour concentration (called Departmental Emphasis) in any one of the social studies fields.

Because of the extensive course requirements for the Social Studies field, majors, in meeting the college general education requirement (see pages 51–52), need not schedule any courses under Item III, Social Sciences.

| REQUIRED:                            |     |  | c.h. | s.h. |
|--------------------------------------|-----|--|------|------|
| Anth.                                | 211 | Anthropology . . . . .                       | 3    | 3    |
| Econ.                                | 211 | Principles of Economics I . . . . .          | 3    | 3    |
| Econ.                                | 212 | Principles of Economics II . . . . .         | 3    | 3    |
| Geog.                                | 130 | Introduction to Cultural Geography . . . . . | 3    | 3    |
| Geog.                                | 257 | Geography of U.S. and Canada . . . . .       | 3    | 3    |
| Hist.                                | 112 | Modern Civilization . . . . .                | 3    | 3    |
| Hist.                                | 213 | History of U.S. and Pennsylvania . . . . .   | 3    | 3    |
| P.S.                                 | 211 | American Government . . . . .                | 3    | 3    |
| Political Science elective . . . . . |     |  | 3    | 3    |
| Psy.                                 | 211 | General Psychology . . . . .                 | 3    | 3    |
| Psy.                                 | 355 | Social Psychology . . . . .                  | 3    | 3    |
| Soc.                                 | 211 | Principles of Sociology . . . . .            | 3    | 3    |

ELECTIVE: (Departmental emphasis should be chosen from the electives below.)

|       |     |  |   |   |
|-------|-----|--|---|---|
| Anth. | 213 | Introduction to Bioanthropology . . . . .      | 3 | 3 |
| Anth. | 214 | Principles of Human Ecology . . . . .          | 3 | 3 |
| Anth. | 353 | Archaeology of Eastern North America . . . . . | 3 | 3 |
| Anth. | 354 | Cultural History of Africa and Asia . . . . .  | 3 | 3 |
| Anth. | 355 | Indians of North America . . . . .             | 3 | 3 |
| Anth. | 356 | Field Archaeology . . . . .                    |   | 4 |
| Anth. | 357 | Indians of South and Central America . . . . . | 3 | 3 |
| Anth. | 358 | World Prehistory . . . . .                     | 3 | 3 |
| Anth. | 359 | Primitive Science and Technology . . . . .     | 3 | 3 |
| Anth. | 360 | Introduction to Folklore . . . . .             | 3 | 3 |
| Anth. | 361 | Witchcraft, Magic, and Religion . . . . .      | 3 | 3 |
| Anth. | 362 | History and Methods of Anthropology . . . . .  | 3 | 3 |
| Anth. | 400 | Individual Research . . . . .                  |   | 2 |
| Anth. | 401 | Individual Research: Archaeology . . . . .     |   | 2 |
| Anth. | 402 | Individual Research: Bioanthropology . . . . . |   | 2 |
| Econ. | 220 | Elements of Statistics . . . . .               | 3 | 3 |
| Econ. | 310 | Microeconomic Theory . . . . .                 | 3 | 3 |
| Econ. | 311 | Macroeconomic Theory . . . . .                 | 3 | 3 |
| Econ. | 312 | Comparative Economic Systems . . . . .         | 3 | 3 |
| Econ. | 340 | Government Regulations . . . . .               | 3 | 3 |
| Econ. | 341 | Public Utilities . . . . .                     | 3 | 3 |
| Econ. | 351 | Industrial Relations . . . . .                 | 3 | 3 |
| Econ. | 361 | International Economic Relations . . . . .     | 3 | 3 |



|       |     |  |   |   |
|-------|-----|--|---|---|
| Econ. | 370 | Money and Banking . . . . .                            | 3 | 3 |
| Econ. | 371 | Public Finance . . . . .                               | 3 | 3 |
| Econ. | 410 | Managerial Economics . . . . .                         | 3 | 3 |
| Econ. | 453 | Economics Seminar . . . . .                            | 3 | 3 |
| Econ. | 470 | Business Cycles . . . . .                              | 3 | 3 |
| Econ. | 490 | History of Economic Thought . . . . .                  | 3 | 3 |
| Geog. | 251 | Economic Geography . . . . .                           | 3 | 3 |
| Geog. | 254 | Conservation of Natural Resources . . . . .            | 3 | 3 |
| Geog. | 255 | Trade and Transportation . . . . .                     | 3 | 3 |
| Geog. | 256 | Geography of Pennsylvania . . . . .                    | 3 | 3 |
| Geog. | 259 | Map Interpretation . . . . .                           | 3 | 3 |
| Geog. | 352 | Climatology . . . . .                                  | 3 | 3 |
| Geog. | 354 | Historical Geography of the United States . . . . .    | 3 | 3 |
| Geog. | 355 | Geography of the Soviet Union . . . . .                | 3 | 3 |
| Geog. | 356 | Geography of Europe . . . . .                          | 3 | 3 |
| Geog. | 357 | Geography of Asia . . . . .                            | 3 | 3 |
| Geog. | 451 | Cartography I . . . . .                                | 3 | 3 |
| Geog. | 452 | Geography of Latin America . . . . .                   | 3 | 3 |
| Geog. | 453 | Geography of Africa and Australia . . . . .            | 3 | 3 |
| Geog. | 454 | Political Geography . . . . .                          | 3 | 3 |
| Geog. | 455 | Cartography II . . . . .                               | 3 | 3 |
| Geog. | 456 | Aerial Photo Interpretation . . . . .                  | 3 | 3 |
| Geog. | 459 | Field Geography . . . . .                              | 3 | 3 |
| Hist. | 111 | History of Ancient and Medieval Civilization . . . . . | 3 | 3 |
| Hist. | 210 | The Black Experience . . . . .                         | 3 | 3 |
| Hist. | 215 | Exploring the American Social Fabric . . . . .         | 3 | 3 |
| Hist. | 254 | History of Latin America: Colonial Period . . . . .    | 3 | 3 |
| Hist. | 255 | History of Latin America: National Period . . . . .    | 3 | 3 |
| Hist. | 256 | History of Pennsylvania . . . . .                      | 3 | 3 |
| Hist. | 310 | History of the Ancient Greeks . . . . .                | 3 | 3 |
| Hist. | 311 | History of Rome to A.D. 565 . . . . .                  | 3 | 3 |
| Hist. | 320 | Medieval History . . . . .                             | 3 | 3 |
| Hist. | 330 | Europe During the Renaissance . . . . .                | 3 | 3 |
| Hist. | 335 | Europe During the Reformation . . . . .                | 3 | 3 |
| Hist. | 340 | History of Europe From 1660 to 1814 . . . . .          | 3 | 3 |
| Hist. | 345 | History of Europe From 1815 to 1924 . . . . .          | 3 | 3 |
| Hist. | 354 | Contemporary American History . . . . .                | 3 | 3 |
| Hist. | 355 | Economic History of the United States . . . . .        | 3 | 3 |
| Hist. | 356 | Contemporary European History . . . . .                | 3 | 3 |
| Hist. | 357 | History of England to 1689 . . . . .                   | 3 | 3 |
| Hist. | 358 | History of England since 1689 . . . . .                | 3 | 3 |
| Hist. | 359 | History of the American Frontier . . . . .             | 3 | 3 |
| Hist. | 361 | History of American Science and Technology . . . . .   | 3 | 3 |
| Hist. | 362 | History of Afro-America . . . . .                      | 3 | 3 |
| Hist. | 365 | Russia to the Twentieth Century . . . . .              | 3 | 3 |
| Hist. | 366 | Russia in the Twentieth Century . . . . .              | 3 | 3 |
| Hist. | 370 | History of the Near East . . . . .                     | 3 | 3 |
| Hist. | 375 | Traditional India . . . . .                            | 3 | 3 |

|       |     |   |   |   |
|-------|-----|---|---|---|
| Hist. | 376 | Modern India-Pakistan . . . . .   | 3 | 3 |
| Hist. | 385 | Modern Southeast Asia . . . . .   | 3 | 3 |
| Hist. | 400 | Contemporary Asia Since the First World War . . .                                     | 3 | 3 |
| Hist. | 439 | U. S. History, National Period, 1783—1860 . . . .                                     | 3 | 3 |
| Hist. | 440 | Rise of Industrial America and the<br>Search for Order: United States 1865—1919 . . . | 3 | 3 |
| Hist. | 452 | America as a World Power . . . . .  | 3 | 3 |
| Hist. | 453 | Twentieth Century World History . . . . .   | 3 | 3 |
| Hist. | 454 | The British Empire and Commonwealth of Nations  | 3 | 3 |
| Hist. | 455 | The Culture of Europe (Educational Tour) . . . . .                                    | 6 | 6 |
| Hist. | 456 | Social and Intellectual History of the United States<br>to 1865 . . . . .             | 3 | 3 |
| Hist. | 457 | Social and Intellectual History of the United States<br>since 1865 . . . . .          | 3 | 3 |
| Hist. | 458 | English Constitutional History . . . . .  | 3 | 3 |
| Hist. | 461 | Colonial America . . . . .  | 3 | 3 |
| Hist. | 462 | American Westward Expansion (1803—1950) . . . .                                       | 3 | 3 |
| Hist. | 463 | Civil War and Reconstruction . . . . .  | 3 | 3 |
| Hist. | 467 | Latin America and its World Relations . . . . .                                       | 3 | 3 |
| Hist. | 471 | The French Revolution . . . . .   | 3 | 3 |
| P.S.  | 210 | Introduction to Political Science . . . . .   | 3 | 3 |
| P.S.  | 351 | State and Local Government . . . . .  | 3 | 3 |
| P.S.  | 352 | International Relations . . . . .   | 3 | 3 |
| P.S.  | 353 | International Organization: Theory and Practice . .                                   | 3 | 3 |
| P.S.  | 354 | Constitutional Law of the United States . . . . .                                     | 3 | 3 |
| P.S.  | 355 | Political Parties and Elections . . . . .   | 3 | 3 |
| P.S.  | 365 | Ancient and Medieval Political Thought . . . . .                                      | 3 | 3 |
| P.S.  | 366 | Modern Political Thought . . . . .  | 3 | 3 |
| P.S.  | 375 | Public Administration . . . . .   | 3 | 3 |
| P.S.  | 451 | Comparative Government . . . . .  | 3 | 3 |
| P.S.  | 452 | Government and Politics of Southeast Asia . . . . .                                   | 3 | 3 |
| P.S.  | 458 | English Constitutional History . . . . .  | 3 | 3 |
| Psy.  | 225 | Psychology of Adjustment . . . . .  | 3 | 3 |
| Psy.  | 230 | Introductory Statistics for the Behavioral Sciences                                   | 3 | 3 |
| Psy.  | 251 | Experimental Psychology . . . . .   | 3 | 3 |
| Psy.  | 260 | Developmental Psychology . . . . .  | 3 | 3 |
| Psy.  | 331 | Child Psychology . . . . .  | 3 | 3 |
| Psy.  | 350 | Industrial Psychology . . . . .   | 3 | 3 |
| Psy.  | 354 | Abnormal Psychology . . . . .   | 3 | 3 |
| Psy.  | 360 | Current Topics . . . . .  | 3 | 3 |
| Psy.  | 452 | Physiological Psychology . . . . .  | 3 | 3 |
| Psy.  | 454 | Personality . . . . .   | 3 | 3 |
| Psy.  | 455 | Psychology of Learning and Motivation . . . . .                                       | 3 | 3 |
| Psy.  | 456 | Psychological Tests and Measurements . . . . .  | 3 | 3 |
| Psy.  | 458 | Sensation and Perception . . . . .  | 3 | 3 |
| Psy.  | 459 | Comparative Psychology . . . . .  | 3 | 3 |
| Psy.  | 464 | Introduction to Clinical Psychology . . . . .   | 3 | 3 |

|             |     |                                     |   |   |
|-------------|-----|-------------------------------------|---|---|
| Soc.        | 321 | Sociology of Work                   | 3 | 3 |
| Soc.        | 351 | Contemporary Social Problems        | 3 | 3 |
| Soc.        | 352 | The Family                          | 3 | 3 |
| Soc.        | 361 | Sociology of Deviant Behavior       | 3 | 3 |
| Soc.        | 362 | Racial and Ethnic Minority Problems | 3 | 3 |
| Soc.        | 363 | Urban Sociology                     | 3 | 3 |
| Soc.        | 370 | Fundamentals of Population Study    | 3 | 3 |
| Social Work | 311 | Principles of Social Work           | 3 | 3 |
| Social Work | 312 | Social Work with Groups             | 3 | 3 |

## SPANISH — 30 Semester Hours, excluding Spanish 151 and 152

REQUIRED: c.h. s.h.

|        |     |                                |   |   |
|--------|-----|--------------------------------|---|---|
| *Span. | 251 | Intermediate Spanish I         | 3 | 3 |
| *Span. | 252 | Intermediate Spanish II        | 3 | 3 |
| Span.  | 255 | Hispanic Civilization I        | 3 | 3 |
| Span.  | 256 | Hispanic Civilization II       | 3 | 3 |
| Span.  | 351 | Advanced Grammar & Composition | 3 | 3 |

ELECTIVE:

|       |     |  |   |   |
|-------|-----|--|---|---|
| Span. | 253 | Commercial Spanish                         | 2 | 2 |
| Span. | 350 | Advanced Conversation & Composition        | 3 | 3 |
| Span. | 352 | Introduction to Spanish Literature         | 3 | 3 |
| Span. | 353 | The Modern Spanish Drama                   | 3 | 3 |
| Span. | 354 | The Modern Spanish Novel                   | 3 | 3 |
| Span. | 355 | The "Generation of 1898"                   | 3 | 3 |
| Span. | 359 | The Literature of the Golden Age           | 3 | 3 |
| Span. | 360 | Survey of Spanish American Lit.            | 3 | 3 |
| Span. | 361 | The History of Mexican Literature          | 3 | 3 |
| Span. | 451 | Supervised Readings in Hispanic Literature | 3 | 3 |

Students participating in foreign study programs must complete at least six hours of Spanish or Spanish-American literature at Clarion State College, regardless of the number of credits earned abroad.

\*May be omitted upon demonstration of proficiency at second year level.

# **SPECIAL FIELDS AND SERVICES IN TEACHER EDUCATION**

## **THE CURRICULUM IN LIBRARY MEDIA AND INFORMATION SCIENCE**

On December 3, 1937, the State Council of Education approved a curriculum for the education of school librarians at Clarion State College.

Library media and information science courses are also offered as electives for Liberal Arts students and for elementary majors electing to take their 18-hour concentration in library media and information science.

Besides meeting the state requirements for elementary and secondary school librarianship, the library media and information science program at Clarion State College gives training in school library techniques and management and the use of educational media, qualifies students for service in public libraries, and offers prerequisite courses for the Master of Science degree in Library Science.

Candidates for the B.S. degree in Education who specialize in library media and information science are required to complete 30 semester hours of library science/communication courses. Upon receipt of the degree, the graduate is recommended for certification as a librarian in all grades of the Pennsylvania public schools.

The student specializing in library media and information science must also complete a minimum requirement of 18 or more credits in an academic field such as communication arts (English), social studies, sciences, or mathematics. If he or she selects a foreign language and takes the Elementary I and II courses, he or she must complete 20 credits plus the methods course. The second field must be one in which he or she can do student teaching. At this time the following areas are not acceptable: art, music, political science, philosophy, psychology. In the senior year, he or she is required to do nine weeks of student teaching in this second field as well as nine weeks of practice work in a school library.

The undergraduate student begins his or her library media and information science courses in the first semester of his or her freshman year with the course, Introduction to Media Librarianship. He or she must maintain at least a "C" average in library science/communication courses and a cumulative "C" average in all courses to graduate. He or she should be able to type. If he or she plans eventually to work for a master's degree

in library science, he or she will need a reading knowledge of French, German, Russian, or Spanish. He or she may, therefore, wish to take one of these languages as an undergraduate.

## THE CURRICULUM IN LIBRARY MEDIA AND INFORMATION SCIENCE EDUCATION

(Sequence of courses subject to change for administrative reasons.)

| 1ST SEMESTER          |     |                                   |      | 2ND SEMESTER          |     |                                   |   |
|-----------------------|-----|-----------------------------------|------|-----------------------|-----|-----------------------------------|---|
| L.S.                  | 255 | Intro. to Media Librnship .....   | 3    | L.S.                  | 257 | Basic Ref. Sources & Serv. ....   | 3 |
| L.S.                  | 432 | Colloquium .....                  | 0    | Comm.                 | 240 | Locally Produced Media Mtls. .... | 3 |
|                       |     |                                   |      | L.S.                  | 432 | Colloquium .....                  | 0 |
| 3RD SEMESTER          |     |                                   |      | 4TH SEMESTER          |     |                                   |   |
| L.S.                  | 258 | Selection of Lib. Mtls. ....      | 3    | L.S.                  | 256 | Admin. of Sch. Libraries ..       | 3 |
| L.S.                  | 357 | Cataloging & Class. ....          | 3    | *L.S.                 | 358 | Lib. Mtls. for Children.....      | 3 |
| L.S.                  | 432 | Colloquium .....                  | 0    | L.S.                  | 432 | Colloquium .....                  | 0 |
| 5TH SEMESTER          |     |                                   |      | 6TH SEMESTER          |     |                                   |   |
| *L.S.                 | 356 | Lib. Mtls. for young people ..... | 3    | **L.S.                | 359 | Curriculum Enrichment ..          | 3 |
| Comm.                 | 440 | Media Program Planning ..         | 3    | L.S.                  | 432 | Colloquium .....                  | 0 |
| L.S.                  | 432 | Colloquium .....                  | 0    |                       |     |                                   |   |
| 7TH SEMESTER (or 8th) |     |                                   |      | 8TH SEMESTER (or 7th) |     |                                   |   |
| Ed.                   | 422 | Prof. Prac. & School Law 2        |      | L.S.                  | 432 | Colloquium .....                  | 0 |
| Ed.                   | 423 | Lib. Practice .....               | 15-6 |                       |     |                                   |   |
| Ed.                   | 424 | Student Teaching .....            | 15-6 |                       |     |                                   |   |

\*Prerequisite: L.S. 258.

\*\*This course is a prerequisite to student teaching.

Before being assigned to student teaching, all students specializing in library media and information science must complete L.S. 256, 257, 258, 259, 356, 357, 359, Comm. 240, 440, or the equivalent, along with eighteen hours in a minor field and the methods course in that field.

The student will find information on scholarship requirements for Teacher Education students on pages 34-37.

A total of 128 semester hours must be completed for the B.S. in Education.

## SEQUENCE OF COURSES — CONCENTRATION FOR ELEMENTARY MAJORS

| 1ST SEMESTER |     |  |  | 2ND SEMESTER |     |                                    |  |
|--------------|-----|--|--|--------------|-----|------------------------------------|--|
| Comm. 240    |     | Locally Produced Media Mtls ..... 3<br>(in lieu of Ed. 329 - Audio-Visual Communication 2) |  | L.S.         | 257 | Basic Ref. Sources & Serv ..... 3  |  |
|              |     |  |  | L.S.         | 432 | Colloquium ..... 0                 |  |
| 3RD SEMESTER |     |  |  | 4TH SEMESTER |     |                                    |  |
| L.S.         | 258 | Selection of Library Mtls 3  |  | L.S.         | 256 | Admin. of Sch. Libraries 3         |  |
| L.S.         | 357 | Cataloging & Class. .... 3   |  | *L.S.        | 356 | Lib. Mtls. for Young People .....3 |  |
| L.S.         | 432 | Colloquium ..... 0   |  | L.S.         | 432 | Colloquium .....0                  |  |

| 5TH SEMESTER          |     |                            | 6TH SEMESTER          |     |                             |
|-----------------------|-----|----------------------------|-----------------------|-----|-----------------------------|
| **L.S.                | 359 | Curriculum Enrichment .. 3 | L.S.                  | 432 | Colloquium .....0           |
| L.S.                  | 432 | Colloquium .....0          |                       |     |                             |
| 7TH SEMESTER (or 8th) |     |                            | 8TH SEMESTER (or 7th) |     |                             |
| L.S.                  | 432 | Colloquium .....0          | El.Ed.                | 422 | Prof. Prac. & School Law2   |
|                       |     |                            | El.Ed.                | 423 | Library Practice..... 15-6  |
|                       |     |                            | El.Ed.                | 424 | Student Teaching ..... 15-6 |

\*Prerequisite: L.S. 258.

\*\*This course is a prerequisite to student teaching.

NOTE: Some students because of the nature of the new elementary program will be required to schedule L.S. 358 the 4th semester and to schedule L.S. 359 the 5th semester. Students are urged to consult the Dean of the School of Library Media and Information Science.

## LIBRARY SCIENCE/COMMUNICATION – 30 Semester Hours

| REQUIRED: |  | c.h. | s.h. |
|-----------|--|------|------|
| L.S.      | 255 Introduction to Media Librarianship .....        | 3    | 3    |
| L.S.      | 256 Administration of School Libraries .....         | 3    | 3    |
| L.S.      | 257 Basic Reference Sources and Services .....       | 3    | 3    |
| L.S.      | 258 Selection of Library Materials .....             | 3    | 3    |
| L.S.      | 356 Library Materials for Young People .....         | 3    | 3    |
| L.S.      | 357 Cataloging and Classification .....              | 3    | 3    |
| L.S.      | 358 Library Materials for Children .....             | 3    | 3    |
| L.S.      | 359 Curriculum Enrichment .....                      | 3    | 3    |
| L.S.      | 432 Colloquium .....                                 |      | 0    |
| Comm.     | 240 Locally Produced Media Materials .....           | 3    | 3    |
| Comm.     | 440 Media Production Planning .....                  | 3    | 3    |
| ELECTIVE: |  |      |      |
| L.S.      | 457 Independent Study Seminar .....                  | 1-3  |      |
| L.S.      | 260 Development and Administration of Libraries .... | 3    | 3    |

## THE DEGREE PROGRAM IN MUSIC EDUCATION

The curriculum for majors in music education at Clarion State College, leading to the degree Bachelor of Science in Music Education, combines a broad requirement in general education with advanced study in theory, history and literature of music, applied music, specialized courses in music education, and participation in musical organizations. The emphasis of the program is two-fold:

- A. The achievement of significant musical understanding and ability: *Musicianship*.
- B. The development of skills and techniques necessary for the effective communication and music understanding and ability to others: *Teaching Ability*.

The purpose of this program is to train prospective public school teachers specializing in music education, with certification in all of the following areas:

- A. Elementary music education, from kindergarten through the sixth grade, including instrumental classes.
- B. Junior high school music programs, including general music, instrumental and vocal classes.
- C. Secondary school music programs, including all vocal and instrumental activities, general music, and elective academic courses in theory, music history, etc.

## GENERAL EDUCATION

The general education distribution for all students in the college is presented on pages 51–52. However, students in the Degree Program in Music Education should include Psy. 211, General Psychology, as partial fulfillment of the General Education requirement in the Social Sciences.

## PROFESSIONAL EDUCATION

|   |     |   | Sem.<br>Hrs. |
|---|-----|---|--------------|
| Ed.   | 223 | Social Foundations of Education .....       | 3            |
| Psy.  | 222 | Educational Psychology .....                | 3            |
| Psychology elective from <i>one</i> of the following: |     |   |              |
| Psy.  | 260 | Developmental Psychology .....              | 3            |
| Psy.  | 321 | Psychology of Adolescence .....             | 3            |
| Psy.  | 331 | Child Psychology .....                      | 3            |
| Mus.  | 333 | Elementary Music Methods .....              | 3            |
| Mus.  | 334 | Junior High & Secondary Music Methods ..... | 3            |
| Mus.  | 362 | Instrumental Methods .....                  | 2            |
| Mus.  | 363 | Vocal Methods .....                         | 2            |
| Ed.   | 422 | Professional Practicum .....                | 2            |
| Ed.   | 432 | Student Teaching .....                      | <u>10</u>    |
| Total .....   |     |   | 31           |

## AREA OF SPECIALIZATION

|      |     |   |   |
|------|-----|---|---|
| Mus. | 135 | Theory of Music I .....                 | 4 |
| Mus. | 136 | Theory of Music II .....                | 4 |
| Mus. | 235 | Theory of Music III .....               | 4 |
| Mus. | 236 | Theory of Music IV .....                | 4 |
| Mus. | 151 | History & Literature of Music I .....   | 3 |
| Mus. | 152 | History & Literature of Music II .....  | 3 |
| Mus. | 251 | History & Literature of Music III ..... | 3 |
| Mus. | 252 | History & Literature of Music IV .....  | 3 |
| Mus. | 365 | Conducting I .....                      | 2 |
| Mus. | 366 | Conducting II .....                     | 2 |
| Mus. | 367 | Orchestration .....                     | 2 |

## KEYBOARD AND VOICE PROFICIENCY

|            |     |                |     |
|------------|-----|----------------|-----|
| *Mus.      | 160 | Piano Class I  | 1   |
| Mus.       | 161 | Piano Class II | 1   |
| Mus.       | 171 | Piano          | 1   |
| *Mus.      | 162 | Voice Class I  | 1   |
| Mus.       | 163 | Voice Class II | 1   |
| * Elective |     |                | (3) |

## INSTRUMENTAL TECHNIQUES ..... Minimum of 5

|      |     |                             |
|------|-----|-----------------------------|
| Mus. | 261 | I: Violin, Viola            |
| Mus. | 262 | II. Cello, String Bass      |
| Mus. | 263 | III: Flute, Oboe, Saxophone |
| Mus. | 264 | IV: Clarinet, Bassoon       |
| Mus. | 265 | V: Trumpet, French Horn     |
| Mus. | 266 | VI: Trombone, Tuba          |
| Mus. | 267 | VII: Percussion             |

## APPLIED FIELD OF PERFORMANCE ..... 7

Instrument — (Mus. 164, 165, 166, 167, 168, 169 or 170); Piano (Mus. 171); Voice (Mus. 172)

## PERFORMING ORGANIZATION

(No credit — seven semesters of participation required)

Total ..... 51–52

\*Students whose applied field of performance is Voice or Piano will substitute an approved music elective.

## DEGREE PROGRAM IN MUSIC EDUCATION

Sample four-year curriculum for students whose field of performance is instrumental. The curriculum for students whose field of performance is piano or voice is similar.

### 1ST SEMESTER: 16 s.h.

|                       | s.h.     |                             | s.h.     |
|-----------------------|----------|-----------------------------|----------|
| Gen. Ed. requirements |          | Mus. 135: Theory of Music I | 4        |
| or Electives          | 9        | Applied Music               | 1        |
|                       | <u>9</u> | Mus. 160: Piano Class I     | 1        |
|                       |          | *Inst. Tech.                | 1        |
|                       |          | Performing Org.             | 0        |
|                       |          |                             | <u>7</u> |

### 2ND SEMESTER: 17 s.h.

|     |                       |                              |          |
|-----|-----------------------|------------------------------|----------|
|     |                       | Mus. 136: Theory of Music II | 4        |
|     |                       | Applied Music                | 1        |
| HPE | Gen. Ed. requirements | Mus. 161: Piano Class II     | 1        |
|     | or Electives          | *Inst. Tech.                 | 1        |
|     | Physical Education    | Performing Org.              | 0        |
|     |                       |                              | <u>7</u> |
|     | <u>10</u>             |                              |          |

### 3RD SEMESTER: 17 s.h.

|     |                       |                                 |          |
|-----|-----------------------|---------------------------------|----------|
|     |                       | Mus. 235: Theory of Music III   | 4        |
|     |                       | Mus. 151: His. & Lit. of Mus. I | 3        |
| HPE | Gen. Ed. requirements | Applied Music                   | 1        |
|     | or Electives          | Piano                           | 1        |
|     | Physical Education    | *Inst. Tech.                    | 1        |
|     |                       | Performing Org.                 | 0        |
|     | <u>1</u>              |                                 | <u>7</u> |
|     | <u>7</u>              |                                 |          |

10



#### 4TH SEMESTER: 17 s.h.

|                                    |   |  |   |
|------------------------------------|---|--|---|
| Psy. 211: General Psychology ..... | 3 | Mus. 236: Theory of Music IV .....     | 4 |
| Ed. 223: Soc. Found. of Ed. ....   | 3 | Mus. 152: His. & Lit. of Mus. II ..... | 3 |
| HPE Health Education .....         | 2 | Applied Music .....                    | 1 |
|                                    | 8 | *Inst. Tech. ....                      | 1 |
|                                    |   | Performing Org. ....                   | 0 |
|                                    |   |  | 9 |

#### 5TH SEMESTER: 18 s.h.

|                                 |    |                                   |   |
|---------------------------------|----|-----------------------------------|---|
| Gen. Ed. requirements           |    | Mus. 251: His. & Lit. of Mus. III | 3 |
| or Electives .....              | 4  | Mus. 365: Conducting I            | 2 |
| Psy. 222: Educational Psy. .... | 3  | Applied Music                     | 1 |
| Mus. 333: Elem. Mus. Methods    | 3  | Mus. 162: Voice Class I           | 1 |
|                                 | 10 | *Inst. Tech.                      | 1 |
|                                 |    | Performing Org.                   | 0 |
|                                 |    |                                   | 8 |

#### 6TH SEMESTER: 18 s.h.

|                                      |    |  |   |
|--------------------------------------|----|--|---|
| Gen. Ed. requirements                |    | Mus. 252: His. & Lit. of Mus. IV ..... | 3 |
| or Electives .....                   | 3  | Mus. 366: Conducting II .....          | 2 |
| Psychology Elective                  |    | Applied Music .....                    | 1 |
| (note Professional                   |    | Mus. 163: Voice Class II .....         | 1 |
| Education) .....                     | 3  | Performing Org. ....                   | 0 |
| Mus. 334: Jr. High & Sec. Mus.       |    |  | 7 |
| Methods .....                        | 3  |  |   |
| Mus. 362: Instrumental Methods ..... | 2  |  |   |
|                                      | 11 |  |   |

#### 7TH SEMESTER (or 8th): 15 or 16 s.h.

|                         |    |                         |   |
|-------------------------|----|-------------------------|---|
| Gen. Ed. requirements   |    | Mus. 367: Orchestration | 2 |
| or Electives .....      | 10 | Applied Music           | 1 |
| Mus. 363: Vocal Methods | 2  | Performing Org.         | 0 |
|                         | 12 |                         | 3 |

#### 8TH SEMESTER (or 7th): 12 s.h.

|                                 |    |
|---------------------------------|----|
| Ed. 422: Professional Practicum | 2  |
| Ed. 432: Student Teaching       | 10 |
|                                 | 12 |

\*Five out of seven Instrumental Techniques (Mus. 261–267) are the minimum requirement. Each family of instruments must be represented in the selection of Instrumental Techniques.

Total Credits required for Graduation: 130–131.

## THE CURRICULUM IN PUBLIC SCHOOL NURSING – 60 Semester Hours

The curriculum in public school nursing, open only to persons who are Registered Nurses, leads to the degree of Bachelor of Science in Public School Nursing.

### GENERAL EDUCATION

|       |     |                                      | c.h. | s.h. |
|-------|-----|--------------------------------------|------|------|
| Eng.  | 111 | Freshman Composition I .....         | 3    | 3    |
| Eng.  | 151 | Composition and Literature .....     | 3    | 3    |
| SCT.  | 113 | Fundamentals of Speech .....         | 3    | 3    |
| Hist. | 112 | History of Modern Civilization ..... | 3    | 3    |
| Hist. | 213 | History of U.S. and Pa. ....         | 3    | 3    |

|       |     |                         |   |           |
|-------|-----|-------------------------|---|-----------|
| P.S.  | 211 | American Government     | 3 | 3         |
| Soc.  | 211 | Principles of Sociology | 3 | 3         |
|       |     | Electives               |   | <u>10</u> |
| Total |     |                         |   | 31        |

## PROFESSIONAL EDUCATION

|       |     |                                 |   |          |
|-------|-----|---------------------------------|---|----------|
| Ed.   | 223 | Social Foundations of Education | 3 | 3        |
| Psy.  | 211 | General Psychology              | 3 | 3        |
| Psy.  | 222 | Educational Psychology          | 3 | 3        |
| Psy.  | 322 | Developmental Psychology        | 3 | 3        |
| Ed.   | 329 | Audio-Visual Communication      | 3 | <u>2</u> |
| Total |     |                                 |   | 14       |

## SPECIALIZED EDUCATION

|       |     |  |   |          |
|-------|-----|--|---|----------|
| N.    | 351 | Public School Nursing                                  | 3 | 3        |
| N.    | 352 | Specialized Health Problems of<br>School Aged Children | 3 | 3        |
| N.    | 353 | Family Case Work                                       | 3 | 3        |
| N.    | 354 | Public Health Nursing                                  | 3 | 3        |
| S.E.  | 211 | General Safety Education                               | 3 | <u>3</u> |
| Total |     |  |   | 15       |

## ENVIRONMENTAL EDUCATION PROGRAM

The curriculum in environmental education, open only to students who are enrolled in or have completed a teacher education program, leads to an endorsement on any instructional certificate and prepares teacher-educators to develop and implement in-school and outdoor environmental education programs in both elementary and secondary schools. Since the program is competency based, the total semester hours needed to complete it will depend upon the student, his or her major field of study, and outside work experience. Students applying for admission in their freshman year may normally expect to complete the program within the usual number of hours required for graduation.

Graduate students in some areas may also complete as part of a Master's program an endorsement to their instructional certificate in Environmental Education by selecting appropriate courses under advisement.

Application for admission to the program is through the Chairman of the Environmental Education Committee.

### REQUIRED COURSES

c.h. s.h.

|               |     |                                    |                 |   |
|---------------|-----|------------------------------------|-----------------|---|
| Envir. St.    | 401 | Environmental Problems in Society  | 3               | 3 |
| Geog.         | 254 | Conservation of Natural Resources  | 3               | 3 |
| Ed.           | 401 | Methods in Environmental Education | 3               | 3 |
| El.Ed. or Ed. | 424 | Student Teaching                   | Variable Credit |   |

## REQUIRED AREAS OF STUDY:

In addition to the courses listed above, students need additional experiences and competencies in field studies, nature oriented studies, and man oriented studies to further their understanding of the relationships between human institutions and value systems and their supporting environment. A listing of courses appropriate to these areas can be obtained from the Dean, School of Professional Studies.

## SAFETY EDUCATION PROGRAM — 12 Semester Hours

REQUIRED: c.h. s.h.

S.E. 351 Driver Education and Traffic Safety ..... 3 3

S.E. 211 General Safety Education ..... 3 3

### ELECTIVE:

S.E. 212 Organization and Administration  
of Safety Education ..... 3 3

S.E. 213 Materials and Methods of Teaching Safety  
in the Secondary Schools ..... 3 3

S.E. 214 The Psychology of Accident Prevention ..... 3 3

S.E. 215 Visual and Other Aids in Safety Education ..... 3 3

Any instructional certificate may be extended to include Driver Education and General Safety Education by completion of 12 semester hours of above courses.

## DEGREE PROGRAM IN SPECIAL EDUCATION TEACHING THE MENTALLY RETARDED

The Special Education curriculum is a competency-based program which has identified specific professional competencies regarded as essential for performance as a diagnostic/prescriptive teacher of children who have special needs. Many of these competencies are acquired through the use of self-directed study from instructional modules which detail the objective(s) to be achieved and identify the instructional materials and processes which the student may employ to reach the target. The instructional modules are in the form of learning packets, or self-directed study guides, which the student may use independent of the college instructor and/or classroom. They have the characteristic of individualization, making it possible for students to travel at their own pace according to individual abilities and initiative.

Human relations skills-training is presented through a series of sensitizing exercises which focus upon fundamental social interactions among teachers, students, administrators, and parents. These crucial teaching attitudes and behavioral skills are deliberately planned instead of assuming that they will happen by chance.

Training in the clinical skills of diagnosing the learning difficulties of children is conducted with pre-school and school-age children who come to the Special Education Department's psycho-educational clinic for intensive study. Prior to such specialized training, students engage in a wide spectrum of field experiences observing and interacting with exceptional children in school and community program settings.

Student teaching is the culminating field experience, conducted during the senior year in a team setting with joint planning and execution of an instructional program for learners who have special needs ranging from severe to mild learning handicaps. This experience is selectively monitored by video cameras which provide important feedback via the videotape recordings which may be reviewed and analyzed to assess the effectiveness of teaching strategies and styles.

### Professional Education and Area of Specialization

|        |     |   |    |
|--------|-----|---|----|
| Ed.    | 223 | Social Foundations of Education               | 3  |
| Ed.    | 329 | Audio-Visual Communication                    | 2  |
| Psy.   | 222 | Educational Psychology                        | 3  |
| Psy.   | 322 | Developmental Psychology                      | 3  |
| El.Ed. | 323 | Teaching of Reading                           | 3  |
| El.Ed. | 324 | Teaching of Elementary School Mathematics     | 3  |
| SPA    | 457 | Developmental Sequence of Language and Speech | 3  |
| Sp.Ed. | 210 | Exceptional Children                          | 3  |
| Sp.Ed. | 215 | Observation and Participation                 | 3  |
| Sp.Ed. | 220 | Nature of Mental Retardation                  | 3  |
| Sp.Ed. | 405 | Learning and Behavioral Disorders             | 3  |
| Sp.Ed. | 410 | Educational Appraisal and Prescription I      | 3  |
| Sp.Ed. | 415 | Instructional Development and Strategies I    | 6  |
| Sp.Ed. | 430 | Teaching/Learning Strategies                  | 1  |
| Sp.Ed. | 450 | Student Teaching                              | 12 |
| Ed.    | 422 | Professional Practicum                        | 2  |

RECOMMENDED ELECTIVES ..... 15 sem. hrs.

NOTE: General Education requirements are listed on pages 51-52.

### REQUIRED OF ALL SPECIAL EDUCATION MAJORS

1st SEMESTER: 17 s.h.

|                          | s.h.     |                           | s.h.     |
|--------------------------|----------|---------------------------|----------|
| Eng. 111: Composition I  | 3        | HPE 111: Health Education | 2        |
| Math. 111: Basic Math    | 3        | General Education         |          |
| Sp. 113: Fundamentals of |          | Requirements or           |          |
| Speech                   | 3        | Electives:                | 6        |
|                          | <u>9</u> |                           | <u>8</u> |

|                                |      |  |           |
|--------------------------------|------|--|-----------|
| 2nd SEMESTER: 16 s.h.          |      |  |           |
| HPE                            |      | Physical Activity . . . . .                                    | 1         |
|                                |      | General Education Requirements or Electives . . . . .          | <u>15</u> |
|                                |      |  | 16        |
| 3rd SEMESTER: 16 s.h.          |      |  |           |
| Psy.                           | 211: | General Psychology . . .                                       | 3         |
| Ed.                            | 223: | Social Foundations . . .                                       | 3         |
|                                |      | General Education Requirements or Electives . . . . .          | 3-6       |
| HPE                            |      | Physical Activity . . . . .                                    | <u>1</u>  |
|                                |      |  | 10-13     |
| 4th SEMESTER: 18 s.h.          |      |  |           |
| SPA                            | 457: | Developmental Sequence of Language and Speech . . . . .        | 3         |
| Psy.                           | 322: | Developmental Psychology . . . . .                             | 3         |
| Psy.                           | 222: | Educational Psychology . . . . .                               | 3         |
|                                |      | General Education Requirements or Electives . . . . .          | 3-6       |
|                                |      |  | 12-15     |
| 5th SEMESTER: 17 s.h.          |      |  |           |
| El.Ed.                         | 323: | Teaching of Reading . . . . .                                  | 3         |
| El.Ed.                         | 324: | Teaching of Elementary School Mathematics . . . . .            | 3         |
| Ed.                            | 329: | Audio-Visual Communication . . . . .                           | <u>2</u>  |
|                                |      |  | 8         |
| 6th SEMESTER: 18 s.h.          |      |  |           |
|                                |      | General Education Requirements or Electives . . . . .          | <u>15</u> |
|                                |      |  | 15        |
| 7th SEMESTER (or 8th): 14 s.h. |      |  |           |
| Ed.                            | 422: | Professional Practicum . . . . .                               | <u>2</u>  |
|                                |      |  | 2         |
| 8th SEMESTER (or 7th): 15 s.h. |      |  |           |
|                                |      | General Education Requirements and Electives . . . . .         | <u>14</u> |
|                                |      |  | 14        |
|                                |      | Sp.Ed. 210: Exceptional Children . . .                         | 3         |
|                                |      | Sp.Ed. 215: Observation and Participation . . . . .            | 3         |
|                                |      | (May be taken 3rd or 4th Semester)                             | <u>3</u>  |
|                                |      |  | 3-6       |
|                                |      | Sp.Ed. 220: Nature of Mental Retardation . . . . .             | <u>3</u>  |
|                                |      |  | 3-6       |
|                                |      | Sp.Ed. 405: Learning and Behavioral Disorders . . .            | 3         |
|                                |      | Sp.Ed. 415: Instructional Development and Strategies . . . . . | <u>6</u>  |
|                                |      |  | 9         |
|                                |      | Sp.Ed. 410: Educational Appraisal and Prescription I . . . . . | <u>3</u>  |
|                                |      |  | 3         |
|                                |      | Sp.Ed. 450: Student Teaching . . . . .                         | <u>12</u> |
|                                |      |  | 12        |
|                                |      | Sp.Ed. 430: Teaching/Learning Strategies . . . . .             | <u>1</u>  |
|                                |      |  | 1         |

## B. S. DEGREE IN LIFE MANAGEMENT SERVICES FOR THE HANDICAPPED

The recent several years have marked the beginning of a serious challenge to the century-long trend in the United States of institutionalizing handicapped persons. The original intent of the institutional movement to rehabilitate and return persons to

their communities was somehow lost when these places became more custodial than rehabilitative. Some persons have spent most of their lives in the "closed community" of the institution without any opportunity for life experiences in a normalized family setting in the open community. The increased tempo of deinstitutionalizing persons to offer them more "normalized" life styles has occasionally exceeded the readiness of the client or the community for this new experience. This has sometimes resulted in sensationalistic references to a "mass release of hospital inmates." It is probably true that the impetus for change is greater than the available supply of trained personnel.

- budgeting,
- banking services,
- food preparation,
- home management,
- career planning and training, and
- job placement.

Career professionals in life management services will probably encounter varied career experiences, moving from direct service and interaction with handicapped persons into program-planning, program-direction and other administrative and supervisory/consultative roles. In order to cope with such diverse responsibilities, the program of preparation offers sufficient specialized as well as generic competencies.

## Program Requirements

| Area of Specialization |     |   | c.h. | s.h. |
|------------------------|-----|---|------|------|
| Sp.Ed.                 | 210 | Exceptional Children . . . . .                        | 3    | 3    |
| Sp.Ed.                 | 215 | Observation and Participation . . . . .               | 3    | 3    |
| Sp.Ed.                 | 220 | Nature of Mental Retardation . . . . .                | 3    | 3    |
| Sp.Ed.                 | 240 | The Physically Handicapped . . . . .                  | 3    | 3    |
| Sp.Ed.                 | 405 | Learning and Behavioral Disorders . . . . .           | 3    | 3    |
| Sp.Ed.                 | 420 | Instructional Development and Strategies II . . . . . | 6    | 6    |
| Sp.Ed.                 | 460 | Habilitation Resources and Processes . . . . .        | 3    | 3    |

## Administrative Decision-Making Processes

(Students will select 12 s.h. from the following courses:)

|                                  |   |   |
|----------------------------------|---|---|
| Bus.Ad. 151 Financial Accounting | 3 | 3 |
|----------------------------------|---|---|

|         |     |   |   |   |
|---------|-----|---|---|---|
| Bus.Ad. | 152 | Managerial Accounting                           | 3 | 3 |
| Bus.Ad. | 220 | Principles of Management                        | 3 | 3 |
| Bus.Ad. | 424 | Personnel Management                            | 3 | 3 |
| P.S.    | 375 | Public Administration                           | 3 | 3 |
| P.S.    | 351 | State and Local Government                      | 3 | 3 |
| Psy.    | 230 | Introductory Statistics for Behavioral Sciences | 3 | 3 |
| Eng.    | 115 | Business Writing                                | 3 | 3 |
| Psy.    | 350 | Industrial Psychology                           | 3 | 3 |

## **HUMAN DEVELOPMENT, PERSONAL ADJUSTMENT AND GUIDANCE**

(Students will select 12 s.h. from the following courses:)

|         |     |                                       |   |   |
|---------|-----|---------------------------------------|---|---|
| Bus.Ad. | 240 | The Legal Environment I               | 3 | 3 |
| G.S.    | 240 | Personal Finance                      | 3 | 3 |
| G.S.    | 220 | Human Sexuality                       | 3 | 3 |
| Psy.    | 225 | Psychology of Adjustment              | 3 | 3 |
| Psy.    | 322 | Developmental Psychology              | 3 | 3 |
| Psy.    | 354 | Abnormal Psychology                   | 3 | 3 |
| Psy.    | 456 | Introduction to Psychological Testing | 3 | 3 |
| SPA     | 452 | Speech Pathology I                    | 3 | 3 |
| Nurs.   | 353 | Family Casework                       | 3 | 3 |
| SPA     | 457 | Developmental Sequences in Language   | 3 | 3 |
| SPA     | 460 | Hearing Problems                      | 3 | 3 |
| Bus.Ad. | 241 | Legal Environment II                  | 3 | 3 |

## **PHYSICAL DEVELOPMENT AND LEISURE-TIME ACTIVITIES**

(Students will select 12 s.h. from the following courses:)

|     |     |                                  |   |   |
|-----|-----|----------------------------------|---|---|
| Art | 233 | Arts and Crafts                  | 3 | 3 |
| HPE | 310 | Adapted Physical Education       | 2 | 2 |
| HPE | 325 | Camping and Outdoor Recreation   | 2 | 2 |
| Art | 231 | Studio Research                  | 3 | 3 |
| Art | 240 | Jewelry                          | 3 | 3 |
| Art | 300 | Ceramics                         | 3 | 3 |
| Art | 313 | Crafts in the Elementary Schools | 3 | 3 |
| Art | 301 | Advanced Ceramics                | 3 | 3 |
| HPE | 210 | Anatomy of Locomotion            | 3 | 3 |
| HPE | 410 | Kinesiology                      | 2 | 2 |

## **SOCIO-CULTURAL INFLUENCES**

(Students will select 12 s.h. from the following courses:)

|             |     |                                      |   |   |
|-------------|-----|--------------------------------------|---|---|
| Soc.        | 351 | Contemporary Social Problems         | 3 | 3 |
| Soc.        | 352 | The Family                           | 3 | 3 |
| Soc.        | 361 | Deviant Behavior                     | 3 | 3 |
| G.S.        | 330 | Problems/Prospects in the Inner City | 3 | 3 |
| Anth.       | 211 | Anthropology                         | 3 | 3 |
| Hist.       | 210 | The Black Experience                 | 3 | 3 |
| Social Work | 311 | Principles of Social Work            | 3 | 3 |

## DEGREE PROGRAM IN SPEECH PATHOLOGY AND AUDIOLOGY

This program provides the academic background necessary for graduate study in Speech Pathology and Audiology and leads to the degree Bachelor of Science in Speech Pathology and Audiology.

### REQUIRED COURSES:

|        |     |   | c.h. | s.h. |
|--------|-----|---|------|------|
| Sp.Ed. | 210 | Exceptional Children . . . . .                                    | 3    | 3    |
| SPA    | 450 | Speech Science I . . . . .  | 3    | 3    |
| SPA    | 451 | Anatomy of Speech and Hearing Mechanisms . . . .                  | 3    | 3    |
| SPA    | 452 | Speech Pathology I . . . . .                                      | 3    | 3    |
| SPA    | 453 | Speech Pathology II . . . . .                                     | 3    | 3    |
| SPA    | 456 | Speech Science II . . . . .                                       | 3    | 3    |
| SPA    | 457 | Developmental Sequences in Language . . . . .                     | 3    | 3    |
| SPA    | 460 | Hearing Problems . . . . .  | 3    | 3    |
| SPA    | 463 | Speech Reading and Auditory Training . . . . .                    | 3    | 3    |
| SPA    | 468 | Speech and Hearing Clinic I: Practicum . . . . .                  | 7½   | 3    |
| Ed.    | 223 | Social Foundations of Education . . . . .                         | 3    | 3    |
| El.Ed. | 323 | Teaching of Reading . . . . .                                     | 3    | 3    |
| Psy.   | 225 | Psychology of Adjustment . . . . .                                | 3    | 3    |
| Psy.   | 260 | Developmental Psychology . . . . .                                | 3    | 3    |
| Psy.   | 455 | Psychology of Learning and Motivation . . . . .                   | 3    | 3    |
| Ed.    | 422 | Professional Practicum Including School Law . . . .               | 2    | 2    |
| SPA    | 422 | Student Teaching with Speech and<br>Hearing Handicapped . . . . . | 30   | 12   |

NOTE: For General Education requirements in Speech Pathology and Audiology see pages 51–52.

## SPEECH PATHOLOGY AND AUDIOLOGY — SEQUENCE OF COURSES

### 1ST SEMESTER

|     |     |                            |   |   |
|-----|-----|----------------------------|---|---|
| SPA | 450 | Speech Science I . . . . . | 3 | 3 |
|-----|-----|----------------------------|---|---|

### 2ND SEMESTER

|     |     |                             |   |   |
|-----|-----|-----------------------------|---|---|
| SPA | 456 | Speech Science II . . . . . | 3 | 3 |
|-----|-----|-----------------------------|---|---|

### 1ST OR 2ND SEMESTER

|        |     |                                |   |   |
|--------|-----|--------------------------------|---|---|
| Sp.Ed. | 210 | Exceptional Children . . . . . | 3 | 3 |
|--------|-----|--------------------------------|---|---|

### 3RD SEMESTER

|     |     |  |   |   |
|-----|-----|--|---|---|
| SPA | 452 | Speech Pathology I . . . . .                     | 3 | 3 |
| SPA | 451 | Anatomy of Speech and Hearing Mechanisms . . . . | 3 | 3 |

### 4TH SEMESTER

|     |     |   |   |   |
|-----|-----|---|---|---|
| SPA | 457 | Developmental Sequences in Language and Speech. . | 3 | 3 |
| SPA | 453 | Speech Pathology II . . . . .                     | 3 | 3 |

### 5TH SEMESTER

|     |     |                            |   |   |
|-----|-----|----------------------------|---|---|
| SPA | 460 | Hearing Problems . . . . . | 3 | 3 |
|-----|-----|----------------------------|---|---|



## 6TH SEMESTER

|     |     |  |   |   |
|-----|-----|--|---|---|
| SPA | 463 | Speech Reading and Auditory Training . . . . . | 3 | 3 |
|-----|-----|--|---|---|

## 5TH OR 6TH SEMESTER

|     |     |  |    |   |
|-----|-----|--|----|---|
| SPA | 468 | Speech and Hearing Clinic I: Practicum . . . . . | 7½ | 3 |
|-----|-----|--|----|---|

## 7TH OR 8TH SEMESTER

|     |     |   |    |    |
|-----|-----|---|----|----|
| Ed. | 422 | Professional Practicum including School Law . . . .               | 2  | 2  |
| SPA | 422 | Student Teaching with Speech and<br>Hearing Handicapped . . . . . | 30 | 12 |

## MILITARY SCIENCE

Indiana University of Pennsylvania, Indiana, Pennsylvania, is authorized a Senior Division Reserve Officers' Training Corps unit and, through an extension center agreement with that university, the program is now open to students at Clarion State College. The Senior Division ROTC program offers the student an opportunity to prepare for the highest service of citizenship; it offers the right to contribute to preservation of the freedoms that U. S. citizenship offers. It is from the knowledge that one is preparing to take his place as a defender of American liberty, in the ranks that have enrolled countless citizen soldiers before him, that comes the greatest reward and meaning of ROTC and Reserve Officer service.

## OBLIGATION

Enrollment in any of the freshman or sophomore ROTC courses (MS 101, 102, 203, or 204) does not differ from enrollment in any other college course in terms of commitment. The student taking an ROTC program basic course incurs no obligation to the Army or to take further Military Science courses.

## REQUIREMENTS FOR ENROLLMENT

The general requirements for enrollment in the ROTC are that the student be a citizen of the United States, physically qualified as prescribed by the Department of the Army, accepted by the college as a regularly enrolled student, not less than 14 years of age, but less than 24 years of age at the time of enrollment in the basic course. For continuance in the ROTC, the student must successfully complete such general survey or screening tests as are given to determine eligibility for admittance to the Advanced Course and agree in writing upon admission to the Advanced Course to complete the course of instruction offered, unless released by the Department of the Army. Veterans and graduates of the Junior

ROTC program may receive credit for portions of the ROTC military course.

## **WHAT ROTC OFFERS**

Uniforms, equipment, and ROTC textbooks are issued without cost to formally enrolled cadets.

Students having successfully completed the Basic Course, or having received credit for the Basic Course by having served on active duty in the Armed Forces, and meeting the Advanced Course admission requirements are paid a subsistence allowance, currently amounting to \$100 per academic month, during the time they are taking the Advanced Course.

After the student completes the Advanced Course and receives his baccalaureate degree from the college, he is commissioned as a second lieutenant in the United States Army Reserve.

Students who have completed the first year Advanced Course and have displayed outstanding qualities of military leadership, high moral character, and definite aptitude for military service are designated "Distinguished Military Students." Students so honored who maintain the standards until graduation are designated "Distinguished Military Graduates," and may be offered an appointment to the Regular Army.

Policies affecting enrollment and continuance of students in the Senior Division of the Reserve Officers' Training Corps are included in the provisions of the Selective Service Act of 1950. This Act provides for military deferment of students (certain basic course students upon their request, and all Advanced Course students until completion of their academic course) under the following conditions:

1. Students enrolled in the ROTC must remain in good standing in both their academic and military courses.
2. They must demonstrate proper and sufficient aptitude and leadership characteristics ultimately to qualify them for appointment as commissioned officers.
3. They must attend and successfully complete summer training camp (usually at the end of the junior year).
4. They are required to sign an agreement to accept a commission in the Army, if and when tendered, and to serve not to exceed two (2) years on active duty as an officer, subject to call by the Secretary of the Army.

## **THE MILITARY SCIENCE CURRICULUM**

The Military Science Curriculum covers four years and is

divided into two courses: The Basic Course and the Advanced Course. Students enrolled in the ROTC program may count 8 credits in Military Science courses under the Personal Development area of the General Education distribution which became effective for freshmen entering the college in August, 1975. Military Science courses may also be counted as free electives.

## **THE BASIC COURSE**

**8 credits**

The first two years of Military Science constitute the Basic Course, which furnishes a background in the development of the U. S. Army and of the Army's role in support of national objectives. Additionally, fundamentals of leadership and management and the application thereof are stressed. (The student incurs no obligation and makes no commitment while enrolled in the Basic Course.)

### **REQUIRED COURSES**

|         |  |           |
|---------|--|-----------|
| MS 101: | World Military History . . . . .   | 2 credits |
| MS 102: | American Military History . . . . .  | 2 credits |
| MS 203: | Fundamentals of Tactical Operations with<br>Applied Terrain Analysis and Military Topography . . | 2 credits |
| MS 204: | National Security and Concept of Force . . . . .   | 2 credits |

## **THE ADVANCED COURSE**

The second two years constitute the Advanced Course which provides case studies in leadership and management, leading to the development of the student's ability to express himself clearly and accurately with emphasis on analysis of military problems, the evaluation of situations, and preparation and delivery of logical solutions. Also covered is a study of combat operations and various military teams to include Military Geography, the coordination and planning necessary between the elements of the teams and the task forces.

### **REQUIRED COURSES**

|         |   |           |
|---------|---|-----------|
| MS 305: | Leadership and the Military<br>Teaching/Learning Relationship . . . . . | 3 credits |
| MS 306: | Advanced Leadership and Management . . . . .                            | 3 credits |
| MS 407: | Theory and Dynamics of the Military Team . . . . .                      | 3 credits |
| MS 408: | Seminar in Military Analysis and Management . . . . .                   | 3 credits |

## **LEADERSHIP LABORATORY**

A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, it provides for articulation of students from the basic experience and

development of the individual to the application of responsibilities and professional experience in a meaningful environment.

## **SUMMER CAMP**

Students attend a six-week summer camp upon completion of the first year of the Advanced Course. Time at camp is devoted to the practical application of principles and theories taught during the preceding school years. While at camp, each student receives lodging, subsistence, uniforms, medical care, reimbursement for travel, and pay in the amount of one-half the pay of a second lieutenant per month.

## **ASSOCIATE DEGREE NURSING PROGRAM**

Clarion State College offers the degree of Associate of Science in Nursing as a two year technical nursing program at the Venango Campus in Oil City, Pennsylvania.

The Associate Degree Nursing Program is designed to prepare technically competent nurses able to give patient-centered care in first-level positions in hospitals or other health agencies and to work effectively with other members of the health team. Upon completion of the program, the graduate will be eligible to take the state licensure examination.

## **OBJECTIVES**

The curriculum in the Associate Degree Nursing Program seeks to provide an educational environment which will enable the student to:

1. Understand the behavior of the individual in relation to his physical, biological, and social environment.
2. Understand and apply basic scientific principles in planning and implementing patient-centered care.
3. Utilize critical thinking and judgment in planning, implementing, and evaluating nursing care for the individual and/or groups of patients.
4. Recognize the basic needs of the individual and, upon analysis of the nursing situation, use problem solving procedures in planning nursing care based on these needs.
5. Perform basic nursing techniques in caring for patients and function as an effective member of the health team.
6. Establish and maintain effective interpersonal relations with patients, their families, and other members of the health team.

7. Recognize his own capabilities and limitations in personal growth.
8. Understand his professional role as a nurse, a person, and a citizen of the community.

## REQUIREMENTS FOR THE FIELD OF NURSING

The requirements for the field of nursing include courses in general education and the specialization as follows:

|    |   |            |
|----|---|------------|
| a. | English Composition .....                   | 6 credits  |
| b. | Humanities .....                            | 6 credits  |
|    | (1) Literature .....                        | 3 credits  |
|    | (2) Speech .....                            | 3 credits  |
| c. | Natural Sciences .....                      | 7 credits  |
|    | (1) Biological Sciences                     |            |
|    | (a) Anatomy and Physiology .....            | 4 credits  |
|    | (b) Microbiology .....                      | 3 credits  |
| d. | Social Sciences .....                       | 12 credits |
|    | (1) Psychology                              |            |
|    | (a) General Psychology .....                | 3 credits  |
|    | (b) Developmental Psychology .....          | 3 credits  |
|    | (c) Psychology of Adjustment .....          | 3 credits  |
|    | (2) Sociology                               |            |
|    | (a) Principles of Sociology .....           | 3 credits  |
| e. | Nursing .....                               | 31 credits |
|    | (1) Fundamentals of Nursing .....           | 4 credits  |
|    | (2) Parental and Child Health Nursing ..... | 8 credits  |
|    | (3) Nursing in Health and Disease I .....   | 8 credits  |
|    | (4) Nursing in Health and Disease II .....  | 8 credits  |
|    | (5) Nursing Seminar .....                   | 3 credits  |
| f. | Electives .....                             | 6 credits  |
|    | (1) Arts Elective .....                     | 3 credits  |
|    | (2) Free Elective .....                     | 3 credits  |
|    | TOTAL .....                                 | 68 credits |

## THE CURRICULUM IN THE FIELD OF NURSING

The associate degree nursing program is expected to be completed in two academic years. The curriculum outline for the nursing program is as follows:

| FIRST SEMESTER |                                   |               |               |
|----------------|-----------------------------------|---------------|---------------|
|                |                                   | Clock<br>Lec. | Hours<br>Lab. |
| Eng.           | 111 Composition I .....           | 3             | 0             |
| Biol.          | 259 Anatomy & Physiology .....    | 2             | 4-6           |
| Psy.           | 211 General Psychology .....      | 3             | 0             |
| Sp.            | 113 Fundamentals of Speech .....  | 3             | 0             |
| Nurs.          | 101 Fundamentals of Nursing ..... | 2             | 6             |
|                |                                   | 13            | 10-12         |
|                |                                   |               | 17            |

## SECOND SEMESTER

|       |     |  |           |           |           |
|-------|-----|--|-----------|-----------|-----------|
| Eng.  | 151 | Composition & Literature . . . . .       | 3         | 0         | 3         |
| Biol. | 260 | Microbiology . . . . .                   | 2         | 3         | 3         |
| Psy.  | 260 | Developmental Psychology . . . . .       | 3         | 0         | 3         |
| Nurs. | 102 | Parental & Child Health Nursing. . . . . | 4         | 12        | 8         |
|       |     |  | <u>12</u> | <u>15</u> | <u>17</u> |

## THIRD SEMESTER

|       |     |   |           |           |           |
|-------|-----|---|-----------|-----------|-----------|
| Eng.  | 170 | The Literary Experience . . . . .       | 3         | 0         | 3         |
|       |     | Arts Elective . . . . .                 | 3         | 0         | 3         |
| Psy.  | 215 | Psychology of Adjustment . . . . .      | 3         | 0         | 3         |
| Nurs. | 201 | Nursing in Health & Disease I . . . . . | 4         | 12        | 8         |
|       |     |   | <u>13</u> | <u>12</u> | <u>17</u> |

## FOURTH SEMESTER

|       |     |  |           |           |           |
|-------|-----|--|-----------|-----------|-----------|
| Soc.  | 211 | Principles of Sociology . . . . .        | 3         | 0         | 3         |
|       |     | Free Elective . . . . .                  | 3         | 0         | 3         |
| Nurs. | 202 | Nursing in Health & Disease II . . . . . | 4         | 12        | 8         |
| Nurs. | 203 | Nursing Seminar . . . . .                | 3         | 0         | 3         |
|       |     |  | <u>13</u> | <u>12</u> | <u>17</u> |

TOTAL CREDITS 68

## VENANGO CAMPUS

### GENERAL EDUCATION COURSE OFFERINGS

Note: Certain courses listed under general education below are also applicable to major fields. Students should consult the college catalog and their advisors to determine which courses should be taken for specific majors.

|                                     |     |                                      |   | Credits |
|-------------------------------------|-----|--------------------------------------|---|---------|
| I. MODES OF COMMUNICATION . . . . . |     |                                      |   | 13      |
| Eng.                                | 111 | Freshman Composition . . . . .       |   | 3       |
| Math.                               | 111 | Basic Elementary Math (or) . . . . . |   | 3       |
| Math.                               | 112 | Basic Secondary Math (or) . . . . .  |   | (3)     |
| SCT                                 | 113 | Fundamentals of Speech . . . . .     |   | 3       |
| II. HUMANITIES . . . . .            |     |                                      |   | 12      |
| Art                                 | 111 | The Visual Arts . . . . .            | 3 |         |
| Art                                 | 231 | Studio Research . . . . .            | 3 |         |
| Eng.                                | 170 | The Literary Experience . . . . .    | 3 |         |
| Eng.                                | 209 | Special Topics in Lit. . . . .       | 3 |         |
| Eng.                                | 210 | The Modes of Lit. . . . .            | 3 |         |
| Eng.                                | 291 | Short Fiction . . . . .              | 3 |         |
| Fr.                                 | 151 | Elem. French I . . . . .             | 4 |         |
| Fr.                                 | 152 | Elem. French II . . . . .            | 4 |         |
| Fr.                                 | 251 | Interm. French I . . . . .           | 3 |         |
| Fr.                                 | 252 | Interm. French II . . . . .          | 3 |         |
| Span.                               | 151 | Elem. Spanish I . . . . .            | 4 |         |
| Span.                               | 152 | Elem. Spanish II . . . . .           | 4 |         |
| Span.                               | 251 | Interm. Spanish I . . . . .          | 3 |         |
| Span.                               | 252 | Interm. Spanish II . . . . .         | 3 |         |
| Sp.                                 | 251 | Voice & Diction . . . . .            | 3 |         |
| Sp.                                 | 253 | Intro. to Theater . . . . .          | 3 |         |
| Mus.                                | 111 | Intro. to Music . . . . .            | 3 |         |

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| III. SOCIAL SCIENCES . . . . .               |  |   |           | 12  |
| Econ. 211                                    | Prin. of Economics I                         | 3 | Psy. 211  | General Psychology . . . 3                  |
| Econ. 212                                    | Prin. of Economics II                        | 3 | Psy. 215  | Psych. of Adjustment . . 3                  |
| Econ. 220                                    | Elements of Statistics                       | 3 | Psy. 260  | Developmental Psych. . . 3                  |
| Hist. 111                                    | Anc. & Med. Civil. .                         | 3 | Psy. 331  | Child Psychology . . . . 3                  |
| Hist. 112                                    | Modern Civilization                          | 3 | Psy. 350  | Industrial Psychology . . 3                 |
| Hist. 213                                    | History of U.S. . . .                        | 3 | Geog. 254 | Consv. of Nat.<br>Resources . . . . . 3     |
| Hist. 235                                    | Topics in Intellectual<br>European History   | 3 | Geog. 257 | Geog. of U.S. & Canada . 3                  |
| Hist. 215                                    | Topics in American<br>Social History . . . . | 3 | Soc. 211  | Principles of Sociology . 3                 |
| Hist. 354                                    | Contemporary<br>American History . .         | 3 | P.S. 211  | American Government . . 3                   |
| IV. NATURAL SCIENCE/MATHEMATICS . . . . .    |  |   |           | 12  |
| Biol. 111                                    | Basic Biology . . . .                        | 4 | Math. 172 | Calc. w/Anal.<br>Geom. I . . . . . 4        |
| Biol. 153                                    | General Biology I . .                        | 4 | Math. 271 | Calc. w/Anal.<br>Geom. II . . . . . 4       |
| Biol. 154                                    | General Biology II . .                       | 4 | Math. 272 | Calc. w/Anal.<br>Geom. III . . . . . 4      |
| Biol. 202                                    | Environmental Biol. .                        | 3 | Math. 221 | Applied Statistics . . . . 3                |
| Biol. 259                                    | Anatomy & Phys. . .                          | 4 | E.S. 111  | Basic Earth Science . . . 3                 |
| Biol. 260                                    | Microbiology . . . .                         | 3 | E.S. 252  | Physical Geology . . . . 3                  |
| Chem. 153                                    | Gen. Chem. I . . . .                         | 3 | E.S. 353  | Descriptive Astronomy . 3                   |
| Chem. 163                                    | Gen. Chem. Lab I . .                         | 1 | PhSci 111 | Basic Phy. Sci. I<br>(Chem.) . . . . . 3    |
| Chem. 154                                    | Gen. Chem. II . . . .                        | 3 | PhSci 112 | Basic Phy. Sci. II<br>(Physics) . . . . . 3 |
| Chem. 164                                    | Gen. Chem. Lab II . .                        | 1 |           |   |
| Math. 130                                    | Practical Math . . . .                       | 3 |           |   |
| Math. 131                                    | Math. for Bus. &<br>Econ. I . . . . . 3      |   |           |   |
| Math. 132                                    | Math. for Bus. &<br>Econ. II . . . . . 3     |   |           |   |
| V. ELECTIVES FOR GENERAL EDUCATION . . . . . |  |   |           | 12  |
| Eng. 112                                     | Extended Comp. . . .                         | 3 | Eng. 281  | Basic Professional<br>Writing . . . . . 3   |
| Eng. 151                                     | Comp. & Lit. . . . .                         | 3 | HPE 111   | Health . . . . . 2                          |
| Eng. 251                                     | Business Writing . . .                       | 3 | Math 171  | Precalculus . . . . . (4)                   |
| BUSINESS EDUCATION SUBJECTS                  |  |   |           |   |
| BSAD 120                                     | Intro. to Business . . . . .                 | 3 |           |   |
| BSAD 131                                     | College Typing . . . . .                     | 2 |           |   |
| BSAD 132                                     | Production Typing . . . . .                  | 3 |           |   |
| BSAD 135                                     | College Shorthand . . . . .                  | 2 |           |   |
| BSAD 136                                     | Executive Shorthand . . . . .                | 3 |           |   |
| BSAD 151                                     | Financial Acctg. . . . .                     | 3 |           |   |
| BSAD 152                                     | Managerial Acctg. . . . .                    | 3 |           |   |
| BSAD 251                                     | Interm. Acct. . . . .                        | 3 |           |   |
| BSAD 102                                     | Computer Prin.—BSAD . . . . .                | 3 |           |   |
| BSAD 220                                     | Principles of Mgmt. . . . .                  | 3 |           |   |
| BSAD 221                                     | Office Management . . . . .                  | 3 |           |   |
| BSAD 240                                     | The Legal Environment . . . . .              | 3 |           |   |
| PROFESSIONAL EDUCATION COURSES               |  |   |           |   |
| Art 222                                      | Art in Elem. Grades . . . . .                | 3 |           |   |
| Psy. 222                                     | Educational Psychology . . . . .             | 3 |           |   |
| Ed. 329                                      | Audio-Visual Education . . . . .             | 2 |           |   |

# COURSE DESCRIPTIONS

## ANTHROPOLOGY

### ANTH. 211: ANTHROPOLOGY 3 s.h.

This course deals with the origin, diversification, and evolution of man's way of life (cultures) from extinct primitive systems to modern industrial civilizations. This course is an introduction to anthropology (the study of man) with emphasis on the nature and concept of culture. Some work is done in physical anthropology. Emphasis is placed on the simple and complex cultures of the world with specific readings in each category.

### ANTH. 213: INTRODUCTION TO BIOANTHROPOLOGY 3 s.h.

A survey study of the human species in time, place, and culture and the investigation of the factors underlying human variation.

### ANTH. 214: PRINCIPLES OF HUMAN ECOLOGY 3 s.h.

A study of the functional inter-relationships of man and his biophysical environment.

### ANTH. 250: PREHISTORIC NORTH AMERICA 3 s.h.

The course examines the development of North American Indian cultures from the beginning of human migration in the Late Pleistocene to the coming of Europeans. Emphasis will be on man's interrelationship with the various New World environments in time and space which led to the rise of prehistoric cultures, food production, trade, etc. No prerequisites.

### ANTH. 251: HISTORIC INDIANS OF NORTH AMERICA 3 s.h.

This course is an ethnographic survey of American Indians. Cultural processes, historic events, and ecological adjustments are explored in order to understand the diversity of Indian culture at the time of their discovery by Europeans. American Indian acculturation and contemporary Indian issues are also considered.

### ANTH 353: ARCHAEOLOGY OF EASTERN NORTH AMERICA 3 s.h.

The course provides a detailed survey of prehistoric developments in North America east of the Mississippi from Late Pleistocene to the Colonial Period. The principal aim is to familiarize students with the prehistory of the Amerind populations in the area, including the gradual emergence of the Woodland pattern.

### ANTH. 354: CULTURAL HISTORY OF AFRICA AND ASIA 3 s.h.

A survey of major cultural trends in Old World cultures exclusive of Europe. Beginning with the prehistoric Middle East, the spread of food production and its consequences is traced through space and time. Special emphasis is given to the rise and development of Asian cultural patterns. The second section of the course deals with African tribal cultures and their history.



**ANTH. 356: FIELD ARCHAEOLOGY** 4 s.h.

This course will give undergraduate students an opportunity to participate actively in all phases of archaeology field investigation of a limited section of the Allegheny river drainage in order to determine cultural sequence, settlement patterns, population density, economy, cultural influences, technologies, and human ecology. Procedures will include reconnaissance, testing of suspected sites, site survey, controlled excavation, site mapping, interpretation and recovery of specimens, and a final site report.

**ANTH. 357: INDIANS OF SOUTH AND CENTRAL AMERICA** 3 s.h.

A survey of Indian cultures from the beginnings in the Late Pleistocene to the coming of the Conquistadores; special emphasis is placed upon culture developments, the rise of states, native agriculture, and the development of arts and crafts, including architecture and ceremonial art. No prerequisite.

**ANTH. 358: WORLD PREHISTORY** 3 s.h.

This course covers the cultural development of Man from the Lower Paleolithic to the beginnings of urbanism in the Bronze and Iron Age. The course examines man's development in Europe, Africa, Asia, and the New World; draws comparisons between cultures; studies the diffusion of cultural traits; and summarizes recent developments in research. No prerequisite:

**ANTH. 359: PRIMITIVE SCIENCE AND TECHNOLOGY** 3 s.h.

This course is designed to provide a better understanding of Man's relationship with and utilization of environment. It traces the development which ultimately leads to the rise of technological societies. In investigating Man's attempts to come to an understanding of the forces around him, the course provides a survey of the history of scientific thought.

**ANTH. 360: INTRODUCTION TO FOLKLORE** 3 s.h.

The course covers the main aspects of oral traditions such as folktale, legend, myth, riddle, folksong, etc., and analyzes the relationship of oral traditions to literature. The systematic study of folklore, its methods, research approaches, and related subjects are investigated. No prerequisite.

**ANTH. 361: WITCHCRAFT, MAGIC, AND RELIGION** 3 s.h.

This course is a cross cultural comparative analysis of man's involvement with the supernatural. The role of religion in society is explored and theories dealing with the nature and function of various aspects of supernaturalism are discussed from an anthropological perspective. No prerequisite.

**ANTH. 362: HISTORY AND METHODS OF ANTHROPOLOGY** 3 s.h.

This course provides a general overview of the history of anthropology as an academic discipline, combined with a survey of anthropological theory and research methods.

#### ANTH. 400: INDIVIDUAL RESEARCH

2 s.h.

Individual research, designed as an advanced course in anthropology, provides for the student's individual approach to a specific problem, defined in conference with the instructor. Regular sessions with the faculty member in charge evaluate the progress of the work and chart its direction. Students are expected to acquire research techniques in dealing with their topics. All branches of anthropology may be used to select a topic. Credit and grades will be given only if the project (term paper, survey, investigation, etc.) has been completed to the satisfaction of the project advisor and the departmental chairman. Prerequisite: Anth. 211.

#### ANTH. 401: INDIVIDUAL RESEARCH: ARCHAEOLOGY

2 s.h.

Individual research, designed as an advanced course in archaeology, provides for the student's individual approach to a specific problem, defined in conference with the instructor. Regular sessions with the faculty member in charge evaluate the progress of the work and chart its direction. Students are expected to acquire research techniques in dealing with their topics. All branches of archaeology may be used to select a topic. Credit and grades will be given only if the project (term paper, survey, investigation, etc.) has been completed to the satisfaction of the project advisor and the departmental chairman. Prerequisite: Anth. 211, 356.

#### ANTH. 402: INDIVIDUAL RESEARCH: BIOANTHROPOLOGY

2 s.h.

Individual research, designed as an advanced course in bioanthropology, provides for the student's individual approach to a specific problem, defined in conference with the instructor. Regular sessions with the faculty member in charge evaluate the progress of the work and chart its direction. Students are expected to acquire research techniques in dealing with their topics. All branches of bioanthropology may be used to select a topic. Credit and grades will be given only if the project (term paper, survey, investigation, etc.) has been completed to the satisfaction of the project advisor and the departmental chairman. Prerequisite: Anth. 211, 213 or the consent of instructor.

#### SUMMER ARCHAEOLOGICAL FIELD SCHOOL

9 s.h.

An integrated program especially designed to provide undergraduates with a practical and theoretical background in modern archaeological research. The program combines three weeks of classroom and laboratory work with five weeks of field research, including excavations. All participants must register for Anth. 353 (Archaeology of Eastern North America), Anth. 356 (Field Archaeology), and Anth. 401 (Individual Research: Archaeology). Students with previous formal field training may register for Anth. 401 only.

## ART

#### ART 111: THE VISUAL ARTS

3 s.h.

This is an introductory art course which deals with form and content as well as the processes and products of art. It is intended to enrich and deepen the student's awareness and understanding of visual art forms.

**ART 112: HISTORY OF ART I 3 s.h.**

The study of the art forms of various cultures beginning with the Paleolithic Period and ending with the Renaissance. No prerequisite.

**ART 113: HISTORY OF ART II 3 s.h.**

The study of the art forms of various cultures beginning with the Renaissance and ending with contemporary movements. No prerequisite.

**ART 222: ART IN THE ELEMENTARY GRADES 3 s.h.**

The place of art and creative activity in the Elementary Public School curriculum is studied. Concern and information centers around the value of creativity, the art activity as an important part of the total learning of the child, the importance of self-expression, and the development of the child at different age levels. Classroom planning, presentation, motivation methods, and lesson plans are developed in workshops or actual teaching situations.

**ART 231: STUDIO RESEARCH IN ART MEDIA 3 s.h.**

A basic course for Elementary majors designed to familiarize and develop sensitivity and insight into media and art processes. The student explores shape, line, surfaces, value, color differences, through basic design problems. Various projects explore the characteristics of chalk, crayon, water color, tempera, clay, print media, papier mache, and sculptural material. Two and three dimensional work problems in all media are studied.

**ART 232: PAINTING I 3 s.h.**

The primary aim of this course is to develop fundamental skills and expression in oil, watercolor, casein, acrylics, and related two dimension media. Emphasis is placed on design and color problems related to painting.

**ART 233: ARTS AND CRAFTS 3 s.h.**

This is an enrichment course to give a basic experience with crafts to any college student. Developing basic skills, techniques, and processes with a variety of craft materials will provide the student with sufficient knowledge to pursue projects on his own. Fiber manipulations of knotting and weaving techniques, stitching, applique, printing, enameling, bookbinding, and batik are only a few possible areas to explore.

**ART 234: ELEMENTARY ART WORKSHOP 3 s.h.**

A workshop designed to meet the needs of teachers in service. Emphasis is placed on materials, processes, and equipment used in today's elementary art program.

**ART 235: PRACTICAL PROBLEMS IN ART EDUCATION 3 s.h.**

Practical problems in art education may be and usually are varied in nature. Some students require more information regarding methods of teaching and others feel that more art techniques are desirable. Whatever the students regard as problems are considered the objectives of the course and are studied to the point where students' needs are considered satisfied.

**ART 236: COLOR AND DESIGN** 3 s.h.

A study of the elements and principles of two dimensional forms in design. Creative processes are stressed. Required of all art majors under the Humanities program.

**ART 237: DRAWING AND COMPOSITION I** 3 s.h.

Problems in basic drawing with emphasis on technique and compositional approaches in various media. Drawing of objects, perspective and other fundamental problems are a vital part of this course. Inventive interpretations and application of creative approaches are also stressed. Required of all art majors under the Humanities program.

**ART 238: DRAWING AND COMPOSITION II** 3 s.h.

Drawing problems will be presented that explore the human figure as an art form using varied media. The relationships between personal, creative drawings and composition as they relate to the figure will be emphasized.

**ART 239: THREE DIMENSIONAL DESIGN** 3 s.h.

The exploration of three dimensional design forms to gain a deeper understanding of the elements and principles of design.

**ART 240: JEWELRY** 3 s.h.

Design and construction of individual pieces of jewelry from sterling silver, semi-precious stones, exotic woods, and other materials. The course deals with soldering techniques, casting techniques, methods of setting stones, chain construction, and all methods known for fabricating jewelry for human adornment.

**ART 241: ADVANCED JEWELRY** 3 s.h.

A continuation of study in the design and construction of jewelry pieces. The student continues his learning and advancing his skills and knowledge of metals, stones, woods, and other materials. Prerequisite: Art 240.

**ART 300: CERAMICS** 3 s.h.

Design and construction of clay pieces in varied techniques and approaches. Basic clay and glaze technology, hand building, throwing, turning, and firing processes.

**ART 301: ADVANCED CERAMICS** 3 s.h.

Students in Advanced Ceramics work with the technical aspects of ceramics — glaze formulation, glaze calculation; experiment with natural local clays and desired clay bodies, decorating methods, glazing, firing techniques — and pursue individual interests. The student works on an independent level investigating desired interests leading to a final individual critique of work accomplished. Prerequisite: Art 300: Ceramics.

**ART 311: GRAPHIC MEDIA AND TECHNIQUES** 3 s.h.

Broad experiences in a wide range of media and processes of graphic expression. Both old and new approaches in lino-cuts, wood block, etching, dry point, lithography, serigraphy, and exploration with new techniques.

**ART 312: SUPERVISED STUDY IN ART** 1–6 s.h.

Opportunity to explore in depth an area of art according to need or interest. Regular weekly sessions with a faculty member in charge to evaluate the progress of the work and chart its direction. Credit and grades will be given only if a scholarly paper or special projects have been completed to the satisfaction of the faculty advisor. Prerequisite: Permission of instructor and department chairman.

**ART 313: CRAFTS IN THE ELEMENTARY SCHOOLS** 3 s.h.

Experimenting with traditional and contemporary materials, processes, and techniques provide the classroom teacher with basic skills to adapt craft experiences to particular age levels. Weaving, stitchery, puppetry, ceramics, jewelry making, printmaking, carving are some areas to be studied.

**ART 314: ARTS AND CRAFTS IN ENVIRONMENTAL EDUCATION** 3 s.h.

Experience with traditional and contemporary processes and techniques, using nature motifs, to provide the classroom teacher with the basic skills to adapt outdoor crafts experiences to particular age levels.

**ART 315: PAINTING II** 3 s.h.

An advanced course in use of basic, traditional painting media and experimental two-dimensional media. Oil, watercolor, casein, acrylics, collage, and other mixed media work. Students are encouraged to develop compositions directly from nature, imagination, and memory.

**ART 316: SCULPTURE I** 3 s.h.

This course emphasizes the aesthetic, structural, and technical principles of three-dimensional form while stressing cast sculpture as a means of artistic expression. The student will experience direct control of clay, wax, plastic, wood, and mixed media while carrying out the various stages of casting in bronze, lead, and aluminum.

**ART 317: SCULPTURE II** 3 s.h.

Applying principles of three dimensional design the student will carry out the various stages of the "lost wax" process leading to the casting of a sculptural idea in bronze and/or aluminum. Instruction in welding technique is explored in relation to sculptural form.

**ART 364: SCENE PAINTING** 3 s.h.

Studio instruction in the use of brushwork and pigments to develop landscape, ornament, panelling, and architectural detail in stage scenery based on the analysis of form and source of light.

## **BIOLOGY**

**BIOL. 111: BASIC BIOLOGICAL SCIENCE** 4 s.h.

This course deals with the principles of biology. Topics include cellular structure and physiology, growth and repair, reproduction and development, control, sources of food energy, inheritance, and man's

interrelationship with his biological environment. The classification of plants and animals is reviewed briefly. Credit not to be applied toward Biology major.

**BIOL. 153: INTRODUCTORY ANIMAL BIOLOGY 4 s.h.**

A survey of the animal kingdom, emphasizing structural, physiological, and evolutionary relationships. Patterns of reproduction, heredity, and development are also considered. Three lecture and three laboratory hours weekly.

**BIOL. 154: INTRODUCTORY PLANT BIOLOGY 4 s.h.**

Complementary to Biol. 153. A phylogenetic approach to the study of the plant kingdom, with emphasis on the evolution of plants, life cycles, reproductive patterns, physiology, morphology, and genetics. Two hours lecture and four hours laboratory weekly.

**BIOL. 201: GENETICS 3 s.h.**

A study of the principles of inheritance in plants, animals, and microorganisms. Topics considered include: Mendelian genetics, modern genetics, the chemical basis of heredity, linkage, recombination, evolution, population genetics, and human genetics. Two lectures and three laboratory hours weekly. Prerequisite: Biol. 153 and 154 or consent of the instructor.

**BIOL. 202 ENVIRONMENTAL BIOLOGY 3 s.h.**

Interaction of organisms and their biotic and abiotic environment; population dynamics and interactions; the reality of communities; energy transfer with an ecological system; components of the ecosystem. Two lectures and three laboratory hours weekly. One all-day Saturday field trip. Prerequisites: Biol. 153 and 154 or equivalent or consent of the instructor.

**BIOL. 203: CELL BIOLOGY 3 s.h.**

Structure and function of plant and animal cells. Two lectures and three laboratory hours weekly. Prerequisites: Biol. 153, 154 and Chem. 153, 154 and 254 or their equivalents or consent of the instructor.

**BIOL. 204: DEVELOPMENTAL BIOLOGY 3 s.h.**

An introduction to important aspects of development including the chemistry and genetics of development and important features of organogenesis. Two lectures and three laboratory hours weekly. Prerequisites: General Biology, General Chemistry, or permission.

**BIOL. 259: ANATOMY AND PHYSIOLOGY 4 s.h.**

A study of the normal structure of the human body and how it functions. Special attention is given to organs within the systems and their interrelationships. Two lectures and four to six laboratory hours weekly.

**BIOL. 260: MICROBIOLOGY 3 s.h.**

A study of microorganisms including viruses, bacteria, fungi, and protozoa, with emphasis on those associated with human health and disease. Consideration is given to immunity and resistance to infectious diseases and to their epidemiological and public health aspects. Laboratory

emphasis is on pathogenic bacteria and the bacteriological and microscopic techniques. Two lectures and three laboratory hours weekly.

**BIOL. 341: GENERAL MICROBIOLOGY** 4 s.h.

A study of microorganisms including viruses, fungi, and bacteria. Culturing, isolation, classification, and ecology of microscopic life from air, water, soil, and dairy products including beneficial and pathogenic forms. Two lectures and six laboratory hours weekly. Prerequisites: Biol. 153, 154 and Chem. 154.

**BIOL. 351: FIELD BOTANY** 3 s.h.

Collection and preparation of plants using herbarium methods. Emphasis on identification of flowering plants in a variety of habitats. Alternate summers. Prerequisites: Biol. 153 and 154.

**BIOL. 352: TAXONOMY OF VASCULAR PLANTS** 3 s.h.

Systems of classification; collection and identification of flowering plants and ferns of the region; use of keys and herbarium collections. Summers only. Prerequisites: Biol. 153 and 154.

**BIOL. 353: ORNITHOLOGY** 3 s.h.

An introduction to the biology of birds. Lectures deal with internal and external adaptation for aerial travel, classification, migration, habitats, plumage changes, nesting habits, and ecologic relations. Two lectures and three laboratory or field trip hours weekly.

**BIOL. 354: ENTOMOLOGY** 3 s.h.

A general study of insects including structure, physiology, classification, economic importance, and relationships. Two lectures and three hours of laboratory or field work weekly.

**BIOL. 356: FIELD ZOOLOGY — INVERTEBRATE** 3 s.h.

A study of invertebrates in the field including the collecting and preserving of such forms. Emphasis will be placed on taxonomy and ecological relationships. Offered alternate summers.

**BIOL. 357: FIELD ZOOLOGY — VERTEBRATE** 3 s.h.

A study of the taxonomy and ecological importance of the vertebrates. Field trips will be taken to various ecological areas to observe and collect. Emphasis will be placed on the identification of living rather than preserved specimens. Offered alternate summers.

**BIOL. 360: PROBLEMS IN BIOLOGY** 1–4 s.h.

Acquaints the student with skills and techniques used in research. The student identifies a problem for investigation and completes all phases of its study including the writing of a research report. Approval must be secured prior to preregistration from the staff member who will direct the student.

**BIOL. 400: SPECIAL TOPICS** 1–6 s.h.

Advanced topics in various areas of biology. The format used will be selected by the professor as most suitable to the study. The course may be offered on request of students, subject to the availability of staff. Enrollment by consent of the instructor.

**BIOL. 401: RADIATION BIOLOGY** 3 s.h.

A course presenting the fundamental aspects of the science of radiology with emphasis on biological applications. The topics studied are physical and genetic effects of radiation on plants and animals; radioactive fall-out and its biological consequences; applications of radioisotopes in biological research; and use of radiation sources and detectors. Prerequisite: One year of chemistry.

**BIOL. 425: FISHERIES BIOLOGY** 3 s.h.

Ecology of fish populations; includes identification, age and growth, population estimation and analysis, food habits, management, and environmental requirements. Five clock hours weekly, including laboratory. Prerequisite: Environmental Biology or consent of the instructor.

**BIOL. 442: MICROBIAL PHYSIOLOGY** 4 s.h.

A study of the physiological reactions involved in the growth, reproduction, and death of microbes. Emphasis will be placed upon the metabolism of carbohydrates, proteins, vitamins, and fats. Enzymes, oxidation-reduction potentials, energy relationships, membrane potentials, and nutrients will be considered. Two lectures and four laboratory periods weekly. Prerequisites: Biol. 341 and Chem. 453 or permission of the instructor.

**BIOL. 444: IMMUNOLOGY** 4 s.h.

An introduction to the fundamental concepts of immunology, immunochemistry, serology, and the role of immunology in epidemiologic studies. Three lectures and three laboratory periods weekly. Prerequisites: Biol. 341 or permission.

**BIOL. 451: ANIMAL PHYSIOLOGY** 3 s.h.

Study of the comparative physiology of animals. Includes water and ion regulation, circulation, respiration, nutrition, nervous activity, endocrine functions, and responses to temperature, light, gases, and pressure. Two lectures and three hours laboratory weekly. Prerequisite: Biol. 203.

**BIOL. 452: PLANT PHYSIOLOGY** 3 s.h.

Life processes and responses of plants to the environment. Synthesis, digestion, and assimilation of foods, mineral nutrition, absorption, translocation. Two lectures and three hours laboratory weekly. Prerequisite: Biol. 203.

**BIOL. 460: COMPARATIVE VERTEBRATE MORPHOLOGY** 3 s.h.

The course traces the most important trends in the evolution of basic structures in vertebrate lines, and conveys an appreciation of how the mammals came to possess the combination of characters that make this group unique. Emphasis is upon evolution and continuity of structure. Laboratory work includes comparative dissection of the dog fish shark, Necturus, and the cat. One lecture and two double periods of laboratory weekly. Prerequisites: Biol. 153, 154.

**BIOL. 461: VERTEBRATE EMBRYOLOGY** 3 s.h.

A study of the development of the vertebrates, including the formation



of germ cells, fertilization, growth and differentiation, and the formation of tissues and organs. One lecture and two double-period laboratories. Prerequisite: One year of biology.

**BIOL. 462: HISTOLOGY** 3 s.h.

A study of the microscopic structure of tissues comprising the organ system of animals, including man. One lecture and two double-period laboratories. Prerequisite: One year of biology.

**BIOL. 470: ANIMAL ECOLOGY** 3 s.h.

Interrelationships of animals and their environment, including physical and biological factors. Discussions and investigations will include animal distribution, procuring food, escape from enemies, surviving climate extremes, species diversity, reproduction, and community organization. Field and laboratory. Prerequisite: Biol. 202.

**BIOL. 471: PLANT ECOLOGY** 3 s.h.

A study of the structure, development, and causes of distribution of plant communities based upon individual studies of the major plants in each group. Emphasis upon plant associations in western Pennsylvania visited during the course. Given alternate summers. Prerequisite: Biol. 202.

**BIOL. 472: PARASITOLOGY** 3 s.h.

A study of parasites in relation to man and his domesticated animals. Emphasis is placed upon morphology and life histories in addition to the ecology of the parasite. Two lectures and three laboratory hours weekly.

**BIOL. 490: EVOLUTION** 3 s.h.

This course considers basic modern evolutionary theories. The effect of the changes of the earth's crust on the origin of life and the course of evolution is stressed, as well as variation and natural selection.

## **BUSINESS ADMINISTRATION**

### **ACCOUNTING**

**BUS. AD. 151: FINANCIAL ACCOUNTING** 3 s.h.

A study of the principles and procedures for collecting, recording, summarizing, and reporting financial information.

**BUS. AD. 152: MANAGERIAL ACCOUNTING** 3 s.h.

A study of the aspects of accounting that aid managers. Included are budgeting, cost behavior and systems, alternative choice decisions, and cash flow. Prerequisite: Bus. Ad. 151.

**BUS. AD. 251: INTERMEDIATE ACCOUNTING** 3 s.h.

A study of accounting theory and practice. Topics included are accounting for current assets, investments, plant and equipment, and intangibles. A special emphasis will be placed upon developing the student's technical and problem-solving ability. Prerequisite: Bus. Ad. 152.

**BUS. AD. 253: FEDERAL TAXES** 3 s.h.

A study of federal income, estate, and gift taxation. Problems of compliance with the law by individuals, partnerships, corporations, estates, and trusts are considered. Prerequisite: Bus. Ad. 151.

**BUS. AD. 351: COST ACCOUNTING, CONTROLS & ANALYSIS** 3 s.h.

Basic consideration of cost principle, procedure, control and analysis. Cost accounting as a "tool" of management is stressed. Prerequisite: Bus. Ad. 151, 152.

**BUS. AD. 353: AUDITING** 3 s.h.

A study of the purposes, the ethical and legal environment, and selected techniques of auditing. Prerequisite: Bus. Ad. 354.

**BUS. AD. 354: ACCOUNTING FOR EQUITIES** 3 s.h.

A study of accounting theory and practice. Topics included are accounting for current and long-term liabilities, corporate equity, pension plans, long-term leases, income taxes, changes in financial position, financial statement analysis, and price-level adjusted statements. A special emphasis will be placed upon developing the student's technical and problem-solving ability. Prerequisite: Bus. Ad. 251 or consent of instructor.

**BUS. AD. 355: ADVANCED ACCOUNTING** 3 s.h.

A consideration of modern developments in accounting, including recent studies and pronouncements by accounting authorities such as the American Institute of Certified Public Accountants and the Securities and Exchange Commission. Included is a study of the problems of accounting for consolidations and partnership equity. A special emphasis will be placed upon developing the student's technical and problem-solving ability. Prerequisite: Bus. Ad. 354.

**BUS. AD. 451: ACCOUNTING PROBLEMS** 3 s.h.

A problem-oriented study of certain specialized areas of accounting. Included are consignments, installment sales, receivership, fiduciary accounting, and governmental accounting. Preparations for the practice portion of the C.P.A. exam are emphasized. Prerequisite: Bus. Ad. 355.

**BUS. AD. 453: PROBLEMS IN FEDERAL TAXATION ACCOUNTING** 3 s.h.

Federal Income Tax concepts and compliance problems of partnerships, corporations, estates, and trusts. Also a brief consideration of the concepts of social security, estate, and gift taxation. Prerequisite: Bus. Ad. 253.

## **COMPUTER AND QUANTITATIVE SCIENCE**

**BUS. AD. 102: INTRODUCTION TO DATA PROCESSING** 3 s.h.

Basic introduction to data processing, computer operation, programming, and problem solving. Topics covered include: punch card machines, computer components, data representation, arithmetic functions, flowcharting, decision tables, computer languages, batch

processing using COBOL, real time using BASIC, operating systems, storage concepts, and minicomputers.

**BUS. AD. 103: BUSINESS COMPUTER PROGRAMMING — COBOL** 3 s.h.

Introduction to the theory and application of COBOL, the most widely used programming language for administrative applications of computers. Included are file organization and computer concepts. Prerequisite: Bus.Ad. 102.

**BUS. AD. 203: COMPUTER PROGRAMMING OF BUSINESS SYSTEMS — COBOL** 3 s.h.

Primary consideration is given to the concepts of file structure, file processing, and COBOL programming in relationship to management processes and needs. COBOL is used to implement, test, and explore systems concepts, including simulations and data base design. Prerequisite: Bus. Ad. 103.

## **FINANCE**

**BUS. AD. 242: REAL ESTATE LAW** 3 s.h.

This course covers the legal relationships and legal instruments involved in listing and selling real property. Prerequisite: BUS. AD. 270 or consent of instructor.

**BUS. AD. 270: PRINCIPLES OF REAL ESTATE** 3 s.h.

This course is designed as an introduction to the broad area of Real Estate. It seeks to lay a foundation of important principles from which a study in depth may be launched. The course should be helpful in preparing for the Real Estate Salesman's license examination. Prerequisite: Sophomore standing or consent of the instructor.

**BUS. AD. 370: FINANCIAL MANAGEMENT** 3 s.h.

A study of the theoretical and analytical framework that a financial manager can use to make decisions in a dynamic economy. Planning the need for funds, acquiring funds, and efficiently utilizing those funds are some of the topics covered. Prerequisites: Econ. 212, and Bus. Ad. 152.

**BUS. AD. 371: REAL ESTATE FINANCE** 3 s.h.

This course is a study of the methods of financing the purchase of real estate, with a brief look at real estate as investment opportunities. Prerequisite: Bus. Ad. 270, or consent of the instructor.

**BUS. AD. 372: BROKERAGE OF REAL ESTATE** 3 s.h.

Brokerage of Real Estate deals with the relationship between: the broker, his client, and the customer; the broker and his salesman, and the broker and the public at large. The realtor and his ethics are stressed. Prerequisite: Bus. Ad. 270, or the consent of the instructor.

**BUS. AD. 373: FUNDAMENTALS OF INSURANCE** 3 s.h.

A survey of the principle methods of handling risk with particular attention to the various types of insurance and how they relate to business and personal affairs. Insurance areas covered will include Life, Accident

and Health, Social, Fire and Allied Lines, Transportation, Casualty and Surety. Principles of selecting insurance for the firm and private citizen will be discussed.

**BUS. AD. 374: PROPERTY AND CASUALTY INSURANCE 3 s.h.**

Treatment of property and liability exposures by application of coverages — fire and allied lines; inland and ocean marine, and casualty and surety bonding. Attention will be paid to rating, underwriting, loss preventing, claims administration and corporate risk management.

**BUS. AD. 470: APPRAISAL OF REAL ESTATE 3 s.h.**

This course is designed to introduce the principles of real estate appraisal to the students. It will include all methods used to appraise real property, and will include both residential and commercial real estate. It is designed to be useful to anyone considering a career in real estate sales and/or real estate appraisal work. The student will have the opportunity to participate in actual real estate appraisals as well as view property under construction to learn types of construction. Prerequisite: Bus. Ad. 270, or the consent of the instructor.

**BUS. AD. 471: SECURITIES ANALYSIS 3 s.h.**

A study of securities as an investment device, and the study of techniques of analysis used in selecting securities. Prerequisite: Bus. Ad. 370.

**BUS. AD. 476: FINANCIAL PROBLEMS 3 s.h.**

A consideration by the case method of the financial problems of business firms. Prerequisite: Bus. Ad. 370.

## **MARKETING**

**BUS. AD. 360: PRINCIPLES OF MARKETING 3 s.h.**

The topics included are the role of the consumer and consumer motivation; selling and buying functions; physical distribution management; and government regulation and control in marketing. The purpose of the course is to develop an understanding of the increasing complexity of the modern marketing system, why it is essential, and how it performs. Prerequisites: Econ. 211, 212, and junior standing.

**BUS. AD. 361: MARKETING MANAGEMENT 3 s.h.**

A study of coordinative effort in planning, organizing, and controlling marketing activities that direct the flow of goods and services from producer to consumer. Prerequisite: Bus. Ad. 360.

**Bus. AD. 362: RETAILING MANAGEMENT 3 s.h.**

Retailing management is designed to introduce students to the field of retailing where they will study such areas as organizational structure, merchandising practices and procedures, promotional activities, store planning, control, etc. Prerequisite: Bus. Ad. 360, Principles of Marketing or instructor approval.

**BUS. AD. 363: ADVERTISING MANAGEMENT 3 s.h.**

The uses of advertising and advertising campaigns by business which

give emphasis to the patterns and types of marketing strategy and its various functions, legal and moral obligations, problems in developing and evaluating advertising programs, budgeting, scheduling, and client-advertising agency relationships. Prerequisite: Bus. Ad. 360.

**BUS. AD. 364: SALESMANSHIP** 3 s.h.

Introduction to the principles of selling. Concerned with influencing, persuading, or the leading of other individuals to buy goods and/or services. Useful for anyone considering a career in sales or sales management. Prerequisite: Permission of the instructor.

**BUS. AD. 366: PHYSICAL DISTRIBUTION MANAGEMENT** 3 s.h.

Concerned with factors involved in the selection of marketing channels and problems involved in managing the task efficiently. Prerequisite: Bus. Ad. 360.

**BUS. AD. 460: SALES MANAGEMENT** 3 s.h.

Designed to cover all aspects concerned with the management of a sales force including the selection and testing of salesmen, training, devising compensation plans and expense accounts, territories, quotas, and evaluations. Case studies and problem solving techniques are utilized. Prerequisite: Bus. Ad. 360.

**BUS. AD. 461: MARKETING RESEARCH** 3 s.h.

The application of scientific and statistical methods and tools to the solution of marketing problems are studied. Prerequisites: Econ. 220 or Econ. 221 and Bus. Ad. 360.

**BUS. AD. 465: MARKETING PROBLEMS** 3 s.h.

A consideration by the case method of the problems facing the producer and middleman. Prerequisites: Bus. Ad. 360, and senior standing.

**BUS. AD. 468: CONSUMER BEHAVIOR** 3 s.h.

The study of theories, models, recent research and research techniques in consumer motivation and decision making. Prerequisite: Bus. Ad. 360 and Psy. 211 or permission of the instructor.

## **MANAGEMENT**

**BUS. AD. 120: INTRO TO BUSINESS** 3 s.h.

An introductory course which emphasizes the philosophical and historical background of business institutions, the functional relationship within the business firms, and relates the firm to the overall framework of society.

**BUS. AD. 220: PRINCIPLES OF MANAGEMENT** 3 s.h.

The course covers the history of management; the planning, organizing, and controlling processes; production, financing, and marketing factors; and orientation to industrial and labor relations and personnel and supervisory management. The emphasis is placed on the management functions and processes required for effective organization in business activity. Prerequisite: second semester sophomore standing.

**BUS. AD. 221: OFFICE MANAGEMENT** 3 s.h.

A systems-oriented approach toward the planning, organizing, directing, and controlling general office activities to include all office equipment and electronic data processing tasks as well as office personnel. Prerequisite: Bus. Ad. 220.

**BUS. AD. 321: ORGANIZATION THEORY AND BEHAVIOR** 3 s.h.

The study of human behavior in organizations; how human beings function in organizations; how organizations pursue their goals; the conditions necessary to secure effective action within organizations; and making and implementing decisions. Emphasis is placed on methods and problems of effectively organizing persons for the achievement of objectives. Prerequisite: Bus. Ad. 220.

**BUS. AD. 322 SELECTION AND MANAGEMENT OF  
BUSINESS INFORMATION SYSTEMS** 3 s.h.

This course shows a manager how to develop business management information systems, either on his own or with the aid of system technicians. It stimulates the systems techniques in organizing and analysis which the student will use in practice. Prerequisite: Bus. Ad. 220.

**BUS. AD. 420: OPERATIONS RESEARCH I** 3 s.h.

Scientific methods which provide executive departments with a quantitative basis for making decisions. Emphasis is placed on deterministic methods such as the transportation problem, linear programming, dynamic programming and PERT. Prerequisite: Econ. 221.

**BUS. AD. 421: OPERATIONS RESEARCH II** 3 s.h.

Scientific methods which provide executive departments with a quantitative basis for making decisions. Emphasis is placed on probabilistic methods such as inventory control, queueing theory, markov chains, reliability theory and simulation. Prerequisites: Econ. 220 or Econ. 222.

**BUS. AD. 424: PERSONNEL MANAGEMENT** 3 s.h.

Manpower recruiting, selecting, testing, and training; compensation theory, policies, and practices, motivation through job enlargement, leadership style, counseling, and disciplinary practices. Prerequisite: Bus. Ad. 220.

**BUS. AD. 425: PRODUCTION MANAGEMENT** 3 s.h.

Philosophy of F. W. Taylor and other management pioneers. Nature of the production cycle, simplification and diversification of product lines, purchasing, materials control, routing, scheduling, dispatching, plant layout. Prerequisite: Econ. 221 and junior standing.

## **SPECIALIZED COURSES**

**BUS. AD. 240: THE LEGAL ENVIRONMENT I** 3 s.h.

The background, importance, and role of law in society; the legal system of the United States and its workings; private property and contract in a free enterprise system; and the evolution of legal attitude toward businesses, including the changing relations between business and government. Prerequisite: sophomore standing.

**BUS. AD. 241: LEGAL ENVIRONMENT II** 3 s.h.

A continuation of the study of law commenced in Bus. Ad. 240: Legal Environment I. Emphasis is placed upon the legal principles involved in the following areas: agency, partnerships and corporations, sales, negotiable instruments, real property. Prerequisite: Bus. Ad. 240.

**BUS. AD. 242: REAL ESTATE LAW** 3 s.h.

This course covers the legal relationships and legal instruments involved in listing and selling real property. Prerequisite: Bus. Ad. 270 or consent of instructor.

**BUS. AD. 490: ADMINISTRATIVE DECISION MAKING** 3 s.h.

This course requires the student to synthesize what he had learned in the separate business fields and to utilize this knowledge in the analysis of complex business problems. This is the capstone course for a degree in business administration. Prerequisite: Business Administration major and senior standing.

**BUS. AD. 491: INDEPENDENT STUDIES IN BUSINESS** 1–3 s.h.

Opportunity to explore in depth a problem or area of business under the direction of a faculty member of the School. Prerequisite: 2.75 grade point average and consent of both instructor and department head. Maximum credit granted in Bus. Ad. 491 is 6 credits.

## **CHEMISTRY**

**CHEM. 111: BASIC PHYSICAL SCIENCE: CHEMISTRY** 3 s.h.

This course is intended for non-science majors and does not assume prior familiarity with chemistry. It does not count toward requirements for science majors, but can be applied to fulfill the general education math-science requirements for non-science majors.

Selected chemical principles are explored with the purpose of providing a background that will enable the student as a citizen to understand issues involving the interaction of science and society; brief experiments are often included. Students who prefer a more traditional chemistry course may elect either Chemistry 153 or 151 to fulfill their general educational requirements. No prerequisites. Fall and Spring. (Also listed as Ph.Sci. 111.)

**CHEM. 151: CHEMICAL PRINCIPLES I** 4 s.h.

Intended for chemistry majors and others who desire a rigorous introductory course. Along with Chem. 152, this comprises the foundation for all subsequent courses in the major sequence. A strong background is desirable but not required. Students should concurrently schedule Chem. 161. Every Fall.

**CHEM. 152: CHEMICAL PRINCIPLES II** 4 s.h.

Continuation of Chem. 151; should be taken concurrently with Chem. 162. Every Spring.

CHEM. 161: CHEMICAL PRINCIPLES LABORATORY I 1 s.h.

Laboratory exercises to exemplify and augment the material in Chem. 151. This course must be taken concurrently with Chem. 151 unless it is being repeated. Every Fall.

CHEM. 162: CHEMICAL PRINCIPLES LABORATORY II 1 s.h.

Laboratory exercises to exemplify and augment the material in Chem. 152. This course must be taken concurrently with Chem. 152 unless it is being repeated. Every Spring.

CHEM. 153: GENERAL CHEMISTRY I 3 s.h.

This is a first course for students not majoring in chemistry; it can serve either as a preparation for Chem. 254 or as a terminal course. Should be taken concurrently with Chem. 163. Every Fall.

CHEM. 154: GENERAL CHEMISTRY II 3 s.h.

Continuation of Chem. 153. In addition to the traditional topics, this course includes a survey of the principles of organic chemistry, with some examples of general interest. Should be taken concurrently with Chem. 164. Every Spring.

CHEM. 163: GENERAL CHEMISTRY LABORATORY I 1 s.h.

Laboratory exercises to exemplify and augment the material in Chem. 153. This course must be taken concurrently with Chem. 153 unless it is being repeated. Every Fall.

CHEM. 164: GENERAL CHEMISTRY LABORATORY II 1 s.h.

Laboratory exercises to exemplify and augment the material in Chem. 154. This course must be taken concurrently with Chem. 154 unless it is being repeated. Every Spring.

CHEM. 211: SCIENCE AND SOCIETY 3 s.h.

A major goal of this course is to equip the citizen to make intelligent choices and to take effective action in areas where science or technology appear to pose threats, offer benefits, demand funding, or require regulation. For this purpose, and for the additional goal of achieving a minimum level of scientific literacy, the needed technical principles are presented in nonmathematical fashion. Emphasis is placed on the similarities and differences between life and other chemical processes, and on the consequences of the Second Law of Thermodynamics. Open to students in all academic areas. Prerequisite: Sophomore standing. Every Fall.

CHEM. 251: ORGANIC CHEMISTRY I 4 s.h.

The study of the nomenclature, preparation, and properties of aliphatic and aromatic hydrocarbons and the reactions of the functional groups including alcohols and halides. Stereochemistry, aromaticity, reaction rates, and mechanisms. Prerequisite: Chem. 151, 152, or 153, 154. Every Fall.

CHEM. 252: ORGANIC CHEMISTRY II 5 s.h.

A continuation of Chem. 251. A discussion of the reactions of functional groups and their analysis by modern instrumental methods. The laboratory includes synthesis and qualitative organic analysis. Prerequisite: Chem. 251. Every Spring.



**CHEM. 254: INTRODUCTORY ORGANIC CHEMISTRY** 3 s.h.

A modern course which surveys the entire field of elementary organic chemistry, both aliphatic and aromatic, with emphasis on nomenclature, simple reactions and mechanisms, and the structure of organic compounds, together with their relation to biology. This course does not count toward the requirements for a major in chemistry. Prerequisites: Chem. 152 or Chem. 154. Fall and Spring.

**CHEM. 264: INTRODUCTORY ORGANIC CHEMISTRY  
LABORATORY** 1 s.h.

Important techniques, synthesis and functional group analyses of organic compounds. This course must be taken concurrently with Chem. 254 unless it is being repeated. Fall and Spring.

**CHEM. 255: INDUSTRIAL CHEMISTRY** 3 s.h.

This course deals with the application of theories, laws, and calculations of chemistry to industrial processes. This work is supplemented by reading of current literature and trips to chemical industries. Prerequisites: Chem. 151, 152, or 153, 154. Offered occasionally.

## **TECHNIQUES AND INSTRUMENTS I – V**

Utilizing the department's extremely complete line of modern equipment, this sequence of laboratory-centered courses has been designed to develop or reinforce skills, techniques, theories, and familiarity with instruments used in all branches of chemistry. There is a progression from those operations and concepts that are essential in many areas, including biological sciences, to those that are somewhat specialized but yet of considerable importance to most chemists. The last courses in the sequence permit some individual choice of topics.

The following are representative of the total content: classical wet analytical techniques, quantitative spectrophotometry, calorimetry, electrochemistry, glassblowing, vacuum-line operations, thermodynamic and kinetic studies, electronic data processing, characterization of macro-molecules, surface studies, molecular and crystal structure determinations by diffraction and spectral methods, quantitative separations, electroanalytical methods, nuclear magnetic resonance, radiochemical techniques, syntheses, basic electronic circuitry.

Course credits and prerequisites are listed below.

**CHEM. 352: TECHNIQUES AND INSTRUMENTS I** 4 s.h.

This course serves students both in chemistry and in related fields. Prerequisite: Chem. 152 or 154. Every Fall.

**CHEM. 356: TECHNIQUES AND INSTRUMENTS II** 2 s.h.

Prerequisite: Chem. 354. This course will normally be taken concurrently with Chem. 355. Every Spring.

**CHEM. 357: TECHNIQUES AND INSTRUMENTS III** 3 s.h.

Prerequisites: Chem. 352, 354; Chem. 355 concurrently, or consent of department. Every Spring.

- CHEM. 461: TECHNIQUES AND INSTRUMENTS IV 2 s.h.  
Prerequisite: Chem. 357. Every Fall.
- CHEM. 462: TECHNIQUES AND INSTRUMENTS V 2 s.h.  
Prerequisite: Chem. 357.
- CHEM. 354: PHYSICAL CHEMISTRY I 4 s.h.  
This course is concerned primarily with the principles of thermodynamics. Kinetics is discussed in the latter portion of the term. The laws of thermodynamics are applied to many problem solving situations. Calculus is used heavily, and a basic familiarity with the handling of simple differentials and integrals is necessary. Kinetics is treated from experimental and mechanistic points of view. Prerequisites: Chem. 152, 162; Physics 252 or 259; Math. 271. Every Fall.
- CHEM. 355: PHYSICAL CHEMISTRY II 4 s.h.  
Both the classical wave formulation and the concept of operators are developed as approaches to the study of quantum mechanics, and simple one-electron problems are solved. This groundwork is then extended to molecular problems. Spectroscopy is examined in detail, particularly as a tool in the determination of molecular structures. Powder and single-crystal x-ray diffraction techniques are discussed and their use as research tools investigated. Prerequisite: Chem. 354; Every Spring.
- CHEM. 359: ADVANCED ORGANIC CHEMISTRY 3 s.h.  
A study of reaction mechanisms, synthetic methods, and structure elucidations. Emphasis is placed on correlation of structure and reactivity and on stereochemistry. Prerequisites: Chem. 252, 355. Every Fall.
- CHEM. 361: QUALITATIVE ORGANIC ANALYSIS 3 s.h.  
The systematic identification of organic compounds and mixtures using classical and instrumental methods. Lectures include structure-property relationships and solution of structural problems by chemical and spectral analyses. Prerequisite: Chem. 252.
- CHEM. 453: BIOCHEMISTRY 4 s.h.  
An introduction to modern cellular biochemistry. A study of the structure and chemistry of proteins and nucleic acids and the metabolic transformations of carbohydrates and lipids and protein synthesis. Prerequisite: Chem. 254 or Chem. 251. Every Spring.
- CHEM. 455: ADVANCED PHYSICAL CHEMISTRY 3 s.h.  
This course is concerned primarily with statistical mechanics and additional aspects of quantum mechanics. Offered occasionally.
- CHEM. 456: ADVANCED INORGANIC CHEMISTRY 3 s.h.  
Various concepts of bonding, encountered in previous courses, are extended and compared to gain some appreciation of their uses and shortcomings. Considerable attention is given to steric relationships in many environments. The descriptive chemistry includes recently discovered compound types as well as the classical period-group-subgroup patterns of behavior. Prerequisite: Chem. 355 (may be taken concurrently) or consent of department. Every Spring.

**CHEM. 459: DEMONSTRATIONS IN CHEMISTRY** 3 s.h.

Studies are made of various demonstration techniques with students devising and applying each with many examples. Special attention is given to the study of the material of the CHEM Study Committee of the American Chemical Society prepared for the purpose of vitalizing high school chemistry courses. Prerequisites: Chem. 151, 152, and at least one other major course. Offered occasionally.

**CHEM. 460: RADIOCHEMISTRY TECHNIQUES** 2 s.h.

A general course dealing with radioactive materials, their radiations, preparation of isotopes in various chemical forms, detection, identification and applications. Aspects of safety and basic laws and regulations are stressed. Emphasis is placed on nuclear instrumentation, including G.M., scintillation and gas flow counting techniques. Work with a neutron howitzer, including basic activation analysis with its associated gamma ray spectroscopy, is studied. Prerequisites: Chem. 152 or 154; Math 151 or 171. Offered occasionally.

**CHEM. 465, 466: CHEMICAL RESEARCH** 1-3 s.h. each

An independent laboratory problem in some field of chemistry of special interest to the student. Admission only by consent of the instructor and the approval of the Department Chairman. Prerequisites: Chem. 355, 357. Fall and Spring.

**CHEM. 470: CHEMICAL LITERATURE AND SEMINAR** 1-2 s.h.

Search of the chemical literature on a topic of current interest, compilation of a bibliography, preparation of an abstract, and presentation of an oral report. Every Spring.

**CHEM. 471: SPECIAL TOPICS IN CHEMISTRY** 3 s.h.

Topics of current interest in the field of chemistry will be presented. The choice of topics will vary from year to year, but the subject areas each year will include topics from three different areas. Topics such as nonaqueous solvents, solid state chemistry, polymers, chemical physics, group theory, stereochemistry, organometallics and recent developments in spectroscopy will be discussed. Prerequisite: Chem. 355 (may be taken concurrently). Offered occasionally.

**CHEM. 485: PROBLEMS IN CHEMICAL EDUCATION** 1-3 s.h.

An opportunity to explore in depth a problem area in chemical education according to the student's need or interests under the direction of a faculty member. Admission only by consent of the instructor and the approval of the Department Chairman. Prerequisites: Junior standing, or consent of the Department. Not open to Chemistry majors in the Liberal Arts or Bachelor of Science Curriculum. Fall and Spring.

## **COMMUNICATION**

**COMM. 240: LOCALLY PRODUCED MATERIALS** 3 s.h.

Design and production of materials — handouts, charts, posters, bulletin

boards, displays, and slide/tape programs. Skills in lettering, layout, design, color, simple photography, and audiotape recording with portable equipment will be learned.

**COMM. 250: JOURNALISM** 3 s.h.

Provides an introduction to mass communication and the media. The current concept of journalism as a skill to achieve effective communication within the confines of numerous occupations is explored, and journalistic techniques are examined. The social responsibility of the press is probed as to the needs of society and society's need to know.

**COMM. 315: PHOTOGRAPHY** 3 s.h.

Provides basic principles of photography. Study of camera and darkroom techniques, the production of photographs for news, advertising, scientific and instructional use. Includes display and other photographic assignments.

**COMM. 400: MEDIA ADVERTISING** 3 s.h.

Analysis and design of advertising in the print and broadcast media from the point of view of the advertising agency, the advertiser, and the consumer.

**COMM. 440: MEDIA PRODUCTION PLANNING** 3 s.h.

Provides the basic scriptwriting and production skills for audiotapes, slide/tape programs, videotapes with portable equipment, simple television studio productions, and silent 8mm films for use for individualized instruction, large and small group instruction, student group projects, and in training and public relations situations in education, the community, business, and industry. Prerequisite: Comm. 240 or permission of the instructor.

## **COMPUTER SCIENCE**

**COMP. SCI. 101: COMPUTER SCIENCE I** 3 s.h.

Beginning course in computer programming. Includes introduction to the operation of third generation computers. Basic concepts of flow-charting and programming, including BAL (Basic Assembly Language). Emphasis is placed on writing and 'debugging' programs with the use of an IBM 360/40 computer.

**COMP. SCI. 102: COMPUTER SCIENCE II** 3 s.h.

Advanced techniques of basic assembly language programming using the IBM 360/40 computer. Emphasis is placed on writing and analyzing programs using card, tape, and disk files. Prerequisite: Computer Science I.

**COMP. SCI. 201: COMPUTER SCIENCE III** 3 s.h.

Further advanced techniques of Basic Assembly programming including physical input/output routines and creation of macro routines. Concepts of Fortran and other languages which meet the needs of the math student will be included.

COMP. SCI. 301: COMPUTER SCIENCE V 3 s.h.

An advanced course in the sequence of Computer Science courses requiring background in Assembler Language and Fortran. This course will develop such areas as overlay techniques and conservation of storage, linkage routines for subroutines, linkage editor maps, debugging operations and evaluation of core dumps. Expansion of scientific routines to utilize compile time formatting of input and output. Documentation standards, documentation and flowcharting techniques. Terminal languages such as APL, ITF and other compiler languages available will be presented as possible approaches to problem solving. Prerequisites: Computer Science 102 and 201.

## ECONOMICS

ECON. 211: PRINCIPLES OF ECONOMICS I 3 s.h.

Introduction to economics, national income analysis, money and banking, monetary and fiscal policy. Each semester.

ECON. 212: PRINCIPLES OF ECONOMICS II 3 s.h.

Consumer behavior and demand; organization of production; market structures and the pricing of outputs and inputs; international economics and selected economic problems. Prerequisite: Econ. 211. Each semester.

ECON. 221: ECONOMIC AND BUSINESS STATISTICS I 3 s.h.

Topics covered are descriptive statistics, probability, probability distributions, mathematical expectation, sampling distributions, determination of sample size, and Bayesian decision theory. Application of these statistical techniques in the areas of business and economics will be emphasized. Prerequisite: College Algebra or equivalent. Each semester.

ECON. 222: ECONOMIC AND BUSINESS STATISTICS II 3 s.h.

Topics covered are confidence intervals, hypothesis testing, the chi-square distribution, analysis of variance, regression and correlation, time series and index numbers. Application of these techniques in the areas of business and economics is emphasized. Prerequisite: Econ. 221. Each semester.

ECON. 310: MICROECONOMIC THEORY 3 s.h.

Basic concepts of microeconomic theory. The behavior of consumers, producers, and markets. Prerequisites: Econ. 211 and 212. Each semester.

ECON. 311: MACROECONOMIC THEORY 3 s.h.

National income accounting and analysis; economic indicators and measures; fluctuations and growth; the role of money in a dynamic economy; forecasting for the economy and the firm; the problems of public policy. The objective of this course is to develop in the student an awareness of the impact of dynamic forces on economic activity in general and specifically on the decisions which must be made by individuals and firms. Prerequisites: Econ. 211 and 212. Spring semester.

**ECON. 312: COMPARATIVE ECONOMIC SYSTEMS** 3 s.h.

Analysis of alternative patterns of economic control, planning, and market structure. Experiences under capitalism, socialism, and mixed economics are compared and evaluated. Prerequisites: Econ. 211 and 212. Fall semester biennially.

**ECON. 340: GOVERNMENT REGULATIONS** 3 s.h.

An examination of the major economic problems arising from public interest in competition, business practices, and labor. The anti-trust laws and regulations are included. Prerequisites: Econ. 211 and 212. Spring semester biennially.

**ECON. 341: PUBLIC UTILITIES** 3 s.h.

An analysis of public policies and methods regarding industries with a public interest with emphasis on transportation, power and communication. The study of legal and financial aspects of public utilities are part of this course. Prerequisites: Econ. 211 and 212. Fall semester biennially.

**ECON. 351: INDUSTRIAL RELATIONS** 3 s.h.

A study of union history, structure, and functions in the United States economy. Collective bargaining, labor laws, and government policies toward labor are included. Management reaction to organized labor unions and related labor problems are stressed. Prerequisites: Econ. 211 and 212. Spring semester biennially.

**ECON. 361: INTERNATIONAL ECONOMIC RELATIONS** 3 s.h.

Theory and practice of international trade. Balance of payments, foreign exchange, national commercial policies, international investment, and foreign aid are considered. Prerequisites: Econ. 211 and 212. Spring semester.

**ECON. 370: MONEY AND BANKING** 3 s.h.

Nature and origins of money; the commercial banking system and money creation; central banking and the Federal Reserve System; monetary policy and domestic and international economic stability. Prerequisites: Econ. 211 and 212. Spring semester.

**ECON. 371: PUBLIC FINANCE** 3 s.h.

Public sector activity and its impact upon resource allocation, income distribution, economic stabilization and economic growth. Financing public sector activity at the federal, state and local levels. Nature and origins of public debt and debt management problems. Prerequisite: Econ. 211 and 212. Fall semester.

**ECON. 410: MANAGERIAL ECONOMICS** 3 s.h.

Use of economic analysis in the formulation of business policies. Decision theory and criteria for decision-making by the firm; output and "scale" decisions; linear programming; profits, production functions and cost functions; competitive equilibrium (industry and firm); demand theory, pricing policies, capital budgeting and investment; uncertainty; inventory management. Prerequisites: Econ. 220, or Econ. 222, Econ. 310 and Bus. Ad. 152. Each semester.

Econ. 414: URBAN AND REGIONAL ECONOMICS 3 s.h.

Introductory subnational economics. Focuses upon problems of economic stability, growth and the distribution of income. Includes elementary trade theory, location theory, systems of cities, land use changes, economic accounting systems and public sector economics. Prerequisites: Senior standing or consent of instructor. Spring semester biennially.

ECON. 423: STATISTICAL TOOLS FOR  
QUANTITATIVE ANALYSIS 3 s.h.

Application of the statistical methods of probability, sampling, estimation, analysis of variance, regression, and correlation in the areas of economics and business. Prerequisites: Econ. 220 or 222. Fall semester biennially.

ECON. 470: BUSINESS CYCLES 3 s.h.

Theories of business fluctuations; applications of modern income theory to business cycles; patterns of cyclical behavior and of long-term economic change. Implications for public policy. Prerequisite: Econ. 212. Spring semester biennially.

ECON. 490: HISTORY OF ECONOMIC THOUGHT 3 s.h.

Development of economic ideas from ancient times to the present. Emphasis upon the period from Adam Smith onward. Considers the economic and political environment in which ideas emerged as well as the leading economists advancing or defending the ideas. Prerequisites: Econ. 211, 212 and senior standing. Spring semester.

ECON. 491: INDEPENDENT STUDIES IN ECONOMICS 1-3 s.h.

Opportunity to explore in depth a problem or area of economics, according to the student's need or interest, under the direction of a faculty member of the Department. Prerequisite: 2.75 grade point average and consent of both instructor and department head. Maximum credit granted in Econ. 491 is 6 credits.

## EDUCATION

ED. 221: DEVELOPMENTAL READING 3 s.h.

A broadly based course which emphasizes improvement in rate, comprehension, reading taste, and independence in reading. Students are introduced to wide and varied sources of reading and numerous means of improvement in reading skills. Instruction in theory and an introduction to the possibilities of a supplementary mechanical program for reading improvement are included.

ED. 223: SOCIAL FOUNDATIONS OF EDUCATION 3 s.h.

An introductory course to teacher preparation including the social aspects of teaching, the educational aspects of the environment, the influence of social class on learning, the social functions of the schools, and the educational problems of a changing society. Requirements and

opportunities for careers in education are related to programs for teacher preparation.

ED. 224: EDUCATIONAL TESTS & MEASUREMENT 3 s.h.

Professional techniques for educational testing procedures applied to the administration, construction, interpretation, and statistical computation of educational measurements. A first course.

ED. 321: METHODS OF TEACHING AND  
EVALUATING ENGLISH 3 s.h.

This course gives consideration to the following: the place of English in the curriculum on the free public school in America; specific procedures for teaching and evaluating oral and written composition, English usage, and literature; the school-wide English program; and the administration of the school paper and the yearbook.

ED. 322: METHODS OF TEACHING AND  
EVALUATING FRENCH 3 s.h.

This course includes training in phonetics as well as in teaching procedures currently considered most effective at the secondary and also the elementary levels. Prerequisite: French 251.

ED. 323: METHODS OF TEACHING AND  
EVALUATING GEOGRAPHY 3 s.h.

A survey of available materials and current curricula in the field of geography form the basis for an analysis of modern techniques in the teaching of geography. Emphasis is placed on the nature, scope, and contributions of geography to general education. Time is devoted to the evaluation of recent textbooks, supplementary readers, government publication, magazines, maps, and pictures. The development of the best methods, techniques, and skills in the use of all teaching aids and in the guiding of pupils in their study is the leading objective of the course.

ED. 324: METHODS OF TEACHING AND  
EVALUATING MATHEMATICS 3 s.h.

Place and function of mathematics in secondary education; content and improvement and evaluation of instruction in mathematics; acquaintance with current literature and research; observation in secondary schools. Prerequisite: 9 hours of college mathematics.

ED. 326: METHODS OF TEACHING AND  
EVALUATING SOCIAL STUDIES 3 s.h.

This course is intended to familiarize prospective teachers with desirable methods which may be used in teaching the social studies. Emphasis is placed on the philosophy, objectives, course of study, and organization of subject matter for teaching purposes, curriculum materials, procedures and development.

ED. 327: METHODS OF TEACHING AND  
EVALUATING SPANISH 3 s.h.

Materials, methods, and problems are covered in the teaching of Spanish on the secondary level. Observations and readings in methodology are extra-class activities.



**ED. 328: METHODS OF TEACHING AND EVALUATING COMMUNICATIVE ARTS 3 s.h.**

A methods course designed to prepare seniors for student teaching. Consideration is given to such areas as: the place of speech in education, classroom procedures, diagnosis of speech needs, criticism of classroom speaking, evaluation of results of instruction, and supervision of extra-curricular activities. Prerequisites: 12 credits in Speech including SCT. 113.

**ED. 329: AUDIOVISUAL COMMUNICATION 2 s.h.**

The study of educational theory and practice concerned with the design and use of messages within the learning environment.

**ED. 331: METHODS OF TEACHING AND EVALUATING FOREIGN LANGUAGES (APPLIED LINGUISTICS) 3 s.h.**

Lectures, discussions, and extensive reading on language learning and language teaching, with an introduction to applied linguistics. Required of all foreign language education majors except those taking Ed. 322 or 327. Spring semester.

**ED. 332: BIOMETHODS 3 s.h.**

A course designed to prepare biology teachers for the secondary schools. Emphasis is on formulating objectives, selecting and organizing content, developing skill in using a variety of teaching strategies, and evaluating pupil progress. The investigatory approach to teaching biology is stressed in laboratory, field, and simulated teaching experiences. Observations and teaching experiences in area schools are included.

**ED. 333: TEACHING OF READING — SECONDARY 3 s.h.**

An overview of physiological and psychological aspects of reading and methods applicable for group and individual instruction at the junior and senior high school levels. English majors who wish to qualify for certification in reading should schedule this course as a prerequisite to all other courses in reading. Not open to Elementary Education majors.

**ED. 334: METHODS OF TEACHING THE PHYSICAL SCIENCES 3 s.h.**

Modern concepts of chemistry, physics, and general science teaching and evaluating with emphasis on a laboratory oriented approach. The philosophy, laboratory techniques, curriculum, testing, and extra-curricular aspects of secondary school chemistry, physics, and general science teaching will be presented. Prerequisite: For secondary chemistry majors — 16 s.h. in chemistry; for comprehensive science majors — 16 s.h. of biology, chemistry, physics and/or applicable geography courses; for physics majors — ten hours of physics. Every Fall.

**ED. 335: METHODS OF TEACHING AND EVALUATING PHYSICS AND MATHEMATICS 3 s.h.**

This course is designed for those students desiring to become certified in both Physics and Mathematics. It contains the modern methods of teaching and evaluating in both these disciplines, as described in the courses listed as Education 334 and Education 324, in that the student

ED. 401: METHODS IN ENVIRONMENTAL (OUTDOOR AND CONSERVATION) EDUCATION 3 s.h.

ED. 422: PROFESSIONAL PRACTICUM  
INCLUDING SCHOOL LAW 2 s.h.

ED. 423, 424: LIBRARY PRACTICE AND SECONDARY  
STUDENT TEACHING (6.6) –12 s.h.

ED. 424: SECONDARY STUDENT TEACHING 12 s.h.

ED. 426: READING PROBLEMS IN THE SECONDARY SCHOOL 3 s.h.

ED. 431:      TEACHING THE EXCEPTIONAL CHILD      3 s.h.

ED. 432 STUDENT TEACHING IN MUSIC 12 s.h.

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# ELEMENTARY EDUCATION

## EL. ED. 110: INTRODUCTION TO ELEMENTARY EDUCATION

3 s.h.

This course familiarizes the student with the aims, organization, and pupil population of the public schools with an emphasis on the elementary program. It also familiarizes the student with the social, historical, philosophical and political foundations of education in the United States. These learnings will be internalized through directed observations and firsthand experience in cooperating public schools or the proposed Research Learning Center and Conservation Education Center of the college.

## EL. ED. 231: CREATIVE ACTIVITIES

3 s.h.

Exploration of the nature and value of creativeness together with classroom opportunities for its development. Consideration of the unit of work and the guidance of children in creative learning and expression. Student participation in individual and group projects by which they demonstrate how creativeness can be fostered in the elementary school.

## EL. ED. 321: CHILD DEVELOPMENT

3 s.h.

Acquisition of understanding and appreciation of the mental, physical, social, and emotional aspects of development. Emphasis on techniques of motivation, principles of learning, the role of individual differences, and environmental factors affecting attitudes, personalities, growth, and intellectual interests. Lectures, discussions, readings, and reports required.

## EL. ED. 323: TEACHING OF READING

3 s.h.

An overview of the physiological and psychological aspects of reading and the materials and methods applicable for group and individual instruction in the elementary grades.

## EL. ED. 324: TEACHING OF ELEMENTARY SCHOOL MATHEMATICS

3 s.h.

This course examines topics from both the "traditional" and the "modern" elementary school mathematics instructional program. Emphasis is placed upon the scope and development of the subject matter of some of the more recent programs and upon the recent psychological contributions in the area of conceptual stages, styles, and tempos related to teaching elementary school mathematics. The development and implementation of a repertoire of mathematics teaching strategies, instructional media, and diagnostic procedures are stressed throughout the course. Prerequisite: Math. 111.

## EL. ED. 325: MODERN CURRICULUM AND METHODS

4 s.h.

An integrated course coordinating theory and practice in the teaching of social studies and language arts. Methods and materials applicable to unit type teaching, to the integrated classroom, and to more traditional formations of the school curriculum are developed. Emphasis is placed on selection, organization, and evaluation of experiences and materials for elementary school children in the areas of social studies and language arts.

EL. ED. 326: READING PROBLEMS IN THE  
ELEMENTARY SCHOOL 3 s.h.

Provides theory and practicum for the remedy of reading and learning problems in the classroom. The diagnostic tools and methods with which to discover and correct the academic, emotional, and physical factors involved in children with specific and non-specific learning disorders in the field of reading. Prerequisite: Student teaching or its equivalent, or permission of department chairman.

EL. ED. 331: CHILDREN'S LITERATURE 3 s.h.

A study of the best children's literature, both old and new, and the age when it is most appreciated. Students are acquainted with the history of children's literature, authors, illustrators, children's periodicals, and sources available for book selection. Wide reading of children's books, story telling, and oral reading are required. Required for elementary majors.

EL. ED. 332: NURSERY—KINDERGARTEN EDUCATION 3 s.h.

Study of the function of pre-school and kindergarten programs in relation to the growth and development of children with a consideration of developmental and environmental influences on emotional problems. Study of the curriculum, physical environment, and such areas in music, literature, arts, science, creative expression, home-school relations, and dramatic play. Campus school experiences, directed reading, and films.

EL. ED. 335: SEMINAR IN EARLY CHILDHOOD  
EDUCATION 1-6 s.h.

Topics and problems in early childhood education which have been omitted or briefly treated in the formally organized course offerings. Students will do field study to strengthen early childhood competencies, based on individual need, and present findings to a seminar group. Prerequisite: Junior Standing and El. Ed. 332.

EL. ED. 422: PROFESSIONAL PRACTICUM  
INCLUDING SCHOOL LAW 2 s.h.

Problems, practices, and regulations attending student teaching professional experiences. Coordination of the student teaching program with the educational objectives of the student teaching centers. Pennsylvania school laws relevant to the work of the beginning elementary school teacher. Practical interpretations of professional ethics and the functions of professional organizations. Limited to student teachers.

EL. ED. 424: ELEMENTARY STUDENT TEACHING 12 s.h.

Observation and participation in teaching and in activities related to the performance of a teacher's work. The semester's program is divided into two student teaching assignments involving experience at two grade levels. Most assignments for elementary student teaching are completed at public school off-campus student teaching centers associated with the College.

EL. ED. 423, 424: LIBRARY PRACTICE AND ELEMENTARY  
STUDENT TEACHING (6,6)-12 s.h.

Observation and participation in teaching and in activities related to the performance of a teacher's work. The semester's program is divided into

two student teaching assignments involving experience at one grade level and an elementary school library. Most assignments for elementary student teaching are completed at public school off-campus student teaching centers associated with the College.

## ENGLISH

### ENG. 111: FRESHMAN COMPOSITION 3 s.h.

This course emphasizes the development of practical skills in expository writing through writing experiences and the study and analysis of prose models. When necessary, work is done in punctuation, basic grammar, and spelling. This course is a college-wide requirement; however, it may under some circumstances be exempted.

### ENG. 112: EXTENDED COMPOSITION 3 s.h.

This course offers further development in basic composition skills for those students who have earned a grade of "D" in Freshman Composition. Other students may enroll with department permission.

### ENG. 151: COMPOSITION AND LITERATURE 3 s.h.

This course stresses the writing of papers as a direct result of reading, discussion and interpretation of a variety of literary types. The short story, the drama, and the poem are examined from several points of view. Research techniques and related skills are utilized as needed. Prerequisite: exemption from or completion of the General Education English requirement.

### ENG. 170: THE LITERARY EXPERIENCE 3 s.h.

This introductory course provides a wide selection of literature to acquaint the student with various literary genres. No prerequisite. Recommended for all students.

### ENG. 201: ADVANCED COMPOSITION 3 s.h.

Advanced composition emphasizes writing experience in critical, expository, descriptive, argumentative, and creative work through intensive study of examples, frequent papers, and critical discussion of students' work.

### ENG. 209: SPECIAL TOPICS IN LITERATURE 3 s.h.

This course will focus on themes and topics of universal and/or current interest as embodied in literature. The special subject of each semester's offerings will be announced in pre-registration. It is suitable for both English and non-English majors and may be taken up to three times for credit, provided that different topics are offered.

### ENG. 210: THE MODES OF LITERATURE 3 s.h.

This introductory course in literature is a study of different genres from the perspective of a particular view of life reflected by literary modes (Comic, Tragic, Heroic, Satiric).

ENG. 221: ENGLISH LITERATURE FROM  
THE BEGINNING TO 1880 3 s.h.

First part of a survey study beginning with the Beowulf poem and extending through the works of such figures as Chaucer, Spenser, Shakespeare, Milton, Pope, and Swift.

ENG. 222: ENGLISH LITERATURE FROM 1800  
TO THE PRESENT 3 s.h.

Second part of survey study including the works of such major writers as Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Hardy, Yeats and Eliot.

ENG. 241: BEGINNING CREATIVE WRITING 3 s.h.

This beginning course in creative writing introduces students to the techniques of both prose and poetry writing. Major emphasis is on writing practice for students and opportunities for guidance and critical examination of their work. Prerequisite: Completion of Freshman Composition requirement.

ENG. 251: BUSINESS WRITING 3 s.h.

This course is designed to meet the specific needs of those students whose skills in written communications are oriented toward the world of business. Prerequisite: satisfactory completion of or exemption from the General Education English requirement, and minimum sophomore standing.

ENG. 252: INTRODUCTION TO THE ENGLISH LANGUAGE 3 s.h.

This introductory course in language study deals generally with the nature of language and specifically with the structures of modern English, its regional and social varieties, and certain highlights of its historical development.

ENG. 253: ENGLISH GRAMMAR AND USAGE 3 s.h.

This course is devoted, first, to an intensive study of traditional English grammar, and second, to an introduction to transformational grammar.

ENG. 281: BASIC PROFESSIONAL WRITING 3 s.h.

This course presents an extension of study and practice in the principles of prose exposition and argumentation skills introduced in Eng. 111: Freshman Composition. Opportunity for independent study area within the framework of a class program offers each student particular application in his major field of interest. This avenue is recommended for all students wishing to attain more sophisticated writing skills.

ENG. 285: CONTEMPORARY BLACK AMERICAN  
LITERATURE — 1910 TO THE PRESENT 3 s.h.

This course is designed to give insight into the Black experience through the reading and discussion of the works of Black writers who have made significant contributions to literature.

ENG. 291: SHORT FICTION OF THE  
TWENTIETH CENTURY 3 s.h.

This course concentrates on the developments in the short story of the

twentieth century. Readings are drawn from such modern writers of wide reputation as Kafka, Joyce, Faulkner, Camus, and Lagerkvist.

**ENG. 312: MODERN DRAMA 3 s.h.**

A comprehensive view of the best dramatic literature of the modern American and British theater since 1890 is presented through lectures, discussion, and experiences related to the contemporary stage.

**ENG. 320: STUDIES IN 19th CENTURY AMERICAN FICTION 3 s.h.**

Analysis and discussion of works by such representative writers as Poe, Hawthorne, Melville, Howells, Crane, and Norris.

**ENG. 322: STUDIES IN 20th CENTURY AMERICAN FICTION 3 s.h.**

Critical reading and discussion of works by such figures as Dreiser, Hemingway, Faulkner, Mailer, Bellow, and Barth.

**ENG. 332: NINETEENTH CENTURY BRITISH NOVEL 3 s.h.**

This course offers an opportunity to explore the English novel from Austen to Hardy. Nine or ten novels will be studied with selections from: Austen, Scott, Eliot, Dickens, Thackeray, Disraeli, Meredith, Trollope, the Brontes, Gaskell. No prerequisite: however, one semester of English literature survey (Eng. 221 or Eng. 222) is recommended.

**ENG. 333: TWENTIETH CENTURY BRITISH NOVEL 3 s.h.**

This course is an in-depth study of the modern British novel from its beginnings in the late nineteenth century to the present. Nine or ten novels will be intensively examined, with selections from such authors as: Hardy, Conrad, Wilde, Lawrence, Joyce, Forester, V. Woolf, A. Huxley, Orwell, Green. No prerequisite; however, one semester of English literature survey (Eng. 221 or Eng. 222) is recommended.

**ENG. 351: ADVANCED PROFESSIONAL WRITING 3 s.h.**

As a logical extension of English 281, this course stresses the preparation and editing of prose writing which will approach publishable quality. Research and investigation as well as manuscript preparation will be conducted within each academic discipline. Prerequisite: Eng. 201 or Eng. 281.

**ENG. 353: TWENTIETH CENTURY POETRY 3 s.h.**

Explication and discussion of works by such writers as Yeats, Frost, Eliot, Auden, Roethke and Lowell.

**ENG. 360: THE CRAFT OF FICTION 3 s.h.**

The course provides extensive practice in the writing of short narrative fiction. Student work is subjected to intensive group criticism. Course standards roughly approximate those of commercial fiction editors.

**ENG. 361: THE CRAFT OF POETRY 3 s.h.**

This course is designed to provide the advanced writer intensive practice in the writing of poetry. A significant portfolio of high-quality poetry is expected of each participant by the end of the course. Prerequisite: Eng.

201 or 241, or permission of instructor based on examination of writing samples.

ENG. 385: AMERICAN POETRY TO 1900 3 s.h.

This course is a survey of major American poets from Anne Bradstreet and Edward Taylor to Emily Dickinson.

ENG. 401: MEDIEVAL LITERATURE 3 s.h.

Examination of works by such major figures as the Pearl Poet, Gower, Chaucer, and Malory.

ENG. 403: SIXTEENTH CENTURY PROSE AND POETRY 3 s.h.

This course consists of studies in the sonnet, the pastoral, and the romantic epic through intensive readings of representative works by Sidney, Shakespeare, and Spenser. The course includes some recognition of continental influences as well as a consideration of the religious, intellectual, and philosophical currents as those contributed to the flowering of lyric and narrative poetry in Renaissance England.

ENG. 411: SHAKESPEARE 3 s.h.

Critical analysis of selected plays emphasizing Shakespeare's poetic and dramatic development.

ENG. 421: STUDIES IN SEVENTEENTH CENTURY  
ENGLISH LITERATURE 3 s.h.

Literary exploration of works by such figures as Bacon, Browne, Jonson, Donne, Herbert, Marvell, and Milton.

ENG. 426: STUDIES IN EIGHTEENTH CENTURY  
ENGLISH LITERATURE 3 s.h.

Critical examination of the works of such representative writers as Dryden, Pope, Swift, Boswell, Johnson, and Goldsmith.

ENG. 431: ENGLISH DRAMA 3 s.h.

Critical analysis of selected works by such figures as Marlowe, Webster, Johnson, Etherege, Wycherly, and Congreve.

ENG. 441: ENGLISH ROMANTIC LITERATURE:  
1789-1832 3 s.h.

The major works of Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries are considered and related to the intellectual, political, and social currents of the time.

ENG. 443: STUDIES IN NINETEENTH CENTURY  
ENGLISH LITERATURE 3 s.h.

Intensive examination of works by such representative writers as Carlyle, Newman, Tennyson, Browning, Arnold, and Morris.

ENG. 455: CRITICISM 3 s.h.

The course is a historical study of literary criticism and aesthetic theory with emphasis upon modern trends.

ENG. 456: ENGLISH HONORS SEMINAR 3 s.h.

Devoted to intensive study of selected writers and their works, the seminar is designed to offer excellent students opportunities for advanced



and unusually challenging study in literature. Admission by departmental invitation.

**ENG. 457: DESCRIPTIVE LINGUISTICS** 3 s.h.

The course presents the essentials of descriptive, historical, comparative, and structural linguistics and demonstrates the interrelationship between linguistics and other fields such as phonetics, semantics, and foreign languages. The course offers students an opportunity to increase their functional knowledge through study of vocabulary, tools, and applications of linguistics.

**ENG. 458: LINGUISTIC HISTORY OF THE ENGLISH LANGUAGE** 3 s.h.

The history of the English language; a study of its origins and changes in structure, usage, pronunciation, spelling, vocabulary, and meaning.

**ENG. 461: WRITERS' WORKSHOP** 3 s.h.

The Clarion Writers' Workshop provides an opportunity for students of writing to work with professionals in a congenial give-and-take atmosphere of the workshop situation. Visiting writers and/or coaches of writing will be in residence to work with students who wish writing experience in a variety of modes.

## **ENVIRONMENTAL STUDIES**

**ENVIR. ST. 401: ENVIRONMENTAL PROBLEMS IN SOCIETY** 3 s.h.

Interdisciplinary study of how the human species and their social institutions interact with the physical and biological systems of the environment.

**ENVIR. ST. 475 FIELD NATURAL HISTORY** 3 s.h.

Competencies in biology, meteorology, geology, and astronomy are explored. Emphasis is placed on developing competencies which will be valuable in teaching Environmental (Outdoor and Conservation) Education. For non-science majors. Prerequisites: Upper division standing.

**NOTE:** For additional courses related to Environmental Education certification endorsement, see Art 314, Ed. 401, and El. Ed. and Ed. 424.

## **FRENCH**

In addition to courses listed below, students of French have an opportunity to study for a summer, a term, or an entire academic year in France and/or Canada.

**FR. 151: FRENCH I (ELEMENTARY I)** 4 s.h.

Essentials of grammar with emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Spring semester.

## FR. 152: FRENCH II (ELEMENTARY II) 4 s.h.

Continuation of French 151, with increasing emphasis on graded reading material. Prerequisite: French 151 or consent of the instructor. Spring semester.

## FR. 153:      ELEMENTARY FRENCH CONVERSATION      3 s.h.

Conversational practice, with extensive oral drill on grammatical patterns. Designed for those students who have met the prerequisites for French 251 but are lacking in aural-oral proficiency. May be taken concurrently with French 251.

## FR. 251: FRENCH III (INTERMEDIATE I) 3 s.h.

Systematic review of basic grammar; graded readings, conversation, translation, and composition on selected topics. Prerequisite: French 152 or two years of high school study and/or a satisfactory placement test score. Fall semester.

## FR. 252: FRENCH IV (INTERMEDIATE II) 3 s.h.

Intensive reading of selected works; outside reading, with oral and/or written reports. Prerequisite: French 251 or three years of high school study and/or a satisfactory placement test score. Spring semester.

## FR. 255: FRENCH CIVILIZATION I 3 s.h.

A survey of French geography, history, literature, and culture designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful, and integral part of a great civilization. Prerequisite: French 252 or four years of high school study and/or a satisfactory placement test score. Required of French majors. Fall semester.

## FR. 256: FRENCH CIVILIZATION II 3 s.h.

Continuation of French 255, which is prerequisite. Required of French majors. Spring semester.

## FR. 260: THE FRENCH SHORT STORY 3 s.h.

A study of representative short stories of the nineteenth and twentieth centuries. All readings and discussions in French.

## FR. 300: FRENCH LITERATURE IN TRANSLATION 3 s.h.

A study of representative French literary works, with particular emphasis on the characters and ideas which have influenced both French and other literatures. The course is conducted in English; no knowledge of French required; no prerequisites.

FR. 351:      ADVANCED FRENCH GRAMMAR  
                 AND COMPOSITION

3 s.h.

## AND COMPOSITION

Intensive oral and written drill with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-French translation, free composition, and conversation on everyday topics. Prerequisites: French 255 and 256 or one literature course. Fall semester.

## FR. 353: THE MODERN FRENCH DRAMA 3 s.h.

French drama from the 1890's to the present day. Playwrights

principally treated are Maeterlinck, Claudel, Cocteau, Giraudoux, Anouilh, Sartre, Camus, Beckett, and Ionesco. Spring semester.

FR. 354: THE MODERN FRENCH NOVEL 3 s.h.

A study of seven major French novelists of the 20th Century; Proust, Gide, Malraux, Mauriac, Sartre, Camus, and Bernanos.

FR. 355: FRENCH ROMANTICISM 3 s.h.

A study of French Romanticism from Chateaubriand to the Revolution of 1848. Major figures: Chateaubriand, Stendhal, Balzac, and Hugo. Spring semester.

FR. 356: FRENCH POETRY FROM BAUDELAIRE  
TO SURREALISM 3 s.h.

A survey of the major trends in French poetry from Baudelaire to the early 20th Century, particularly Baudelaire, Rimbaud, Verlaine, Mallarmé and Valéry.

FR. 357: THE FRENCH REALISTIC NOVEL 3 s.h.

A study of French realism and naturalism from the Revolution of 1848 to 1900. Major figures: Balzac, Flaubert, Zola, and Daudet.

FR. 358: THE LITERATURE OF THE  
AGE OF ENLIGHTENMENT 3 s.h.

Readings of essays, drama, and fiction of the 18th Century. Major figures: Montesquieu, Voltaire, Diderot, and Rousseau.

FR. 359: THE LITERATURE OF THE CLASSICAL AGE 3 s.h.

Classical French philosophy, drama, and poetry: Corneille, Racine, Molière, Pascal, Descartes, La Fontaine.

FR. 451: SUPERVISED READINGS  
IN FRENCH LITERATURE 3 s.h.

As the title suggests, the course is devoted to selected readings determined in relation to the needs and interests of the individual major.

## GENERAL STUDIES

Courses carrying the G.S. label are interdisciplinary in nature or are courses which do not fit into any of the usual academic disciplines. They are taken as free electives under general education, or may with departmental approval be substituted for required courses in some majors.

G.S. 100: COLLEGE READING/STUDY SKILLS 2 s.h.

This course develops the reading/study skills required at the college level. Students will be helped to organize study plans according to the purpose of the assignment and the nature of the materials. Emphasis will be placed on applying these skills to courses students are currently studying. No prerequisites.

GS. 211 ASCENT OF MAN 3 s.h.

A self-study course tracing the social and scientific development of man from Australopithecus to modern times. The instructional format includes:

a) a fifteen-hour-long block of televised programs; b) fifteen 30-minute audio programs; c) ten paperback textbooks; and d) a study guide. No prerequisite.

**G.S. 220: HUMAN SEXUALITY 3 s.h.**

A basic course in self-understanding. The student is given the opportunity to be informed on (a) the physical, psychological, ethical, social, and legal components of sexuality as they relate to attitudes toward self and others; (b) the roles involved in being male or female; (c) relationships as they are affected by attitudes; and (d) the responsibilities of such relationships.

**G.S. 222: CREATIVE PROBLEM SOLVING 3 s.h.**

An investigation of the elements of solving a variety of problems, beginning with closed problems such as puzzles or cryptograms, and progressing through simple games and complex games to the complexities of open ended problems of personal and political life. Emphasis will be on development of proficiency in dealing with new situations and techniques through actual practice. No prerequisites.

**G.S. 225: HUMAN GENETICS AND SOCIETAL PROBLEMS 3 s.h.**

Technological and medical advances pose serious threats to the quality of man's genetic future. The relationships between major advances in genetic knowledge and their significance, both immediate and potential, will be presented and discussed. The medical and social benefits and risks of large scale genetic screening, genetic counseling and prenatal diagnosis with abortion will be thoroughly explored. The theoretical and practical possibilities of genetic engineering will be considered in the light of contemporary human values. A paper on some aspect of societal problems on human genetics will be required. This course will not meet the genetics requirement for a biology major. Prerequisite: Basic Biology or permission of the instructor.

**G.S. 230: MAN IN THE BIOSPHERE 3 s.h.**

A study of functional relationships of man and his total environment.

**G.S. 240: PERSONAL FINANCE 3 s.h.**

Major aspects of personal financial management including budgeting of income and expenditures, transactions and relations with banks, and other lending institutions, insurance and retirement plans, home ownership, personal taxes, savings and investment plans.

**G.S. 242: YOU AND THE LAW 3 s.h.**

A survey of the major fields of law with an emphasis on historical development, basic legal principles, legal theory and procedure, and their relation to the individual.

**G.S. 250: THE LIFE AND MINISTRY OF JESUS 3 s.h.**

A study of the life and ministry of Jesus in the light of modern contemporary biblical scholarship. Sophomore standing.

**B.S. 330: PROBLEMS AND PROSPECTS  
IN THE INNER CITY**

3 s.h.

A multi-perspective examination of the interrelationship between the inner-city school and minority youth. The course will include the sociological foundations of the minority communities and the urban setting, characteristics of the minority student, the dynamics of the school structure, and racism. Particular emphasis will be given to an analysis of the complexities of the urban classroom, teacher roles, and strategies for change. The course will emphasize a humanistic approach to these problems.

## **GEOGRAPHY AND EARTH SCIENCE**

NOTE: Geography courses carry social science credit only; Earth science courses carry natural science credit only.

**E.S. 111: BASIC EARTH SCIENCE**

3 s.h.

A survey of the Earth Sciences including Earth-space relations, Earth motions, development of land forms, weather and climate, soils and related vegetation, water as a resource of the land, oceans. Emphasis is on the lithosphere (mountain building and erosion) and the atmosphere. Called Basic Physical Geography in older catalogues.

**GEOG. 130: INTRODUCTION TO CULTURAL GEOGRAPHY**

3 s.h.

A geographic study of man's interaction with the global environment and resulting humanized, cultural landscapes. Students examine related problems of population and settlement, the origin and diffusion of culture elements, levels of culture, agricultural and industrial complexes, and their impact upon our deteriorating environment.

**GEOG. 251: ECONOMIC GEOGRAPHY**

3 s.h.

The production, exchange, and use of the basic commodities of the world; the relationship between the physical factors and economic conditions and the patterns of major economic activities, world trade and trade routes; economic landscapes; problems of economic development. Recommended for majors in economics, history, and political science.

**E.S. 252: PHYSICAL GEOLOGY**

3 s.h.

A study of the earth, including minerals and rocks, and the processes, both constructional and destructional, which have shaped it since it was formed. Constructional processes include volcanism, mountain building, and sedimentation. Destructional processes include the erosional activity of streams, glaciers, ground water, waves, and wind. In connection with these topics, an effort is made to acquaint the student with the methods and work of geologists and with some of the research at the frontiers of geology. The course includes a field trip into local areas. No prerequisites.

**E.S. 253: LAND FORMS**

3 s.h.

A study of the physical forces that sculpture and modify the landforms of the earth, including chiefly weathering, streams, glaciation and shore

processes. Some preliminary work on topographic and geologic maps and rocks is included. Called Geomorphology in older catalogues. Prerequisite: E.S. 252 (Physical Geology) or consent of instructor.

**GEOG. 254: CONSERVATION OF NATURAL RESOURCES 3 s.h.**

The use and conservation of the nation's resources of water, land, forest, wildlife, minerals, power, and human resources.

**GEOG. 255: TRADE AND TRANSPORTATION 3 s.h.**

A geographic inquiry into world-wide forces of supply and demand and related transport modes and media. The central producer and service functions of population centers; world trade patterns of commodities, economic blocs, stages of economic development; and problems related to the economic interdependence of regions and nations. A course based on concepts learned in Economic Geography (Geog. 251).

**GEOG. 256: GEOGRAPHY OF PENNSYLVANIA 3 s.h.**

A regional analysis of Pennsylvania, emphasizing man's cultural and economic response to environmental factors. Special attention is given to the resources of the state, analyzing their extent, their use, the need for well directed conservation, and the regional planning program of the Commonwealth.

**GEOG. 257: GEOGRAPHY OF THE UNITED STATES  
AND CANADA 3 s.h.**

An analysis of geographic problems, natural and cultural, of the U. S. and Canada; the synthesis of physical, biotic, economic, and social patterns and problems of geographic regions of North America; the interrelationship of North American political structures and their ties with the rest of the world.

**ES. 258: HISTORICAL GEOLOGY 3 s.h.**

The course deals with the interpretation of the record of the rocks and the geologic history of the earth with emphasis on North America. The physical history of the continent and the development of life, especially backboneed forms, are discussed. Regional geologic history is illustrated by selected areas, notably Appalachia. Prerequisite: E.S. 252.

**GEOG. 259: MAP INTERPRETATION 3 s.h.**

A broad study of maps, charts, and atlases which is designed to develop an awareness of the great variety of maps available and to promote skill in their use. Emphasis is given to understanding map characteristics and properties needed for effective map usage, projections upon which maps are commonly drawn, co-ordinates and grid systems, map scales, aerial representations of relief, and statistical data. Prerequisite: permission of the department.

**E.S. 260: MINERALS 3 s.h.**

The identification, uses, physical and chemical properties, occurrence, origin, and crystallography of the common minerals. Called Mineralogy in older catalogues. Prerequisite: at least high school chemistry.

**E.S. 261: ROCKS 3 s.h.**

The identification, occurrence and origin, classification, physical and

chemical properties and uses of the common rocks. Includes a brief study of the important rock forming minerals. Called Petrology in older catalogues. Prerequisite: E.S. 252 or E.S. 111.

**E.S. 271: THE NEW GEOLOGY** 3 s.h.

This course treats some of the newer spectacular developments in geology which have radically changed much of the field in the last few years. These include continental drift and crustal shift, sea-floor spreading, exploration of the ocean floors and margins, causes of ice ages, paleomagnetism, and geological discoveries on the moon and near planets. The origin of igneous rocks and some of the newer aspects of mountain-building are more briefly treated. Formerly called Physical Geology II. Prerequisite: E.S. 252, Physical Geology.

**E.S. 351: METEOROLOGY** 3 s.h.

A systematic study of the atmosphere, analyzing the laws and underlying principles of atmospheric change. Students have the opportunity to become familiar with the common weather instruments, to observe and record weather data, to read and interpret weather maps, and to consider the problems of aviation growing out of atmospheric conditions.

**GEOG. 352: CLIMATOLOGY** 3 s.h.

A systematic study of three major components of climatology. Physical aspects of the atmosphere are analyzed as a series of long-term weather phenomena. Regional characteristics of climate are studied on the basis of world-wide patterns. Applied aspects of climate demonstrate the inter-relationship and importance of both physical and regional climatology to man. Acceptable for social science or natural science credit. Prerequisite: E.S. 111 or E.S. 351.

**E.S. 353: DESCRIPTIVE ASTRONOMY** 3 s.h.

The motions of the earth, moon, and planets and their connotations; the nature of the sun; the instruments of the astronomer, with observations of the constellations and types of stars. Special attention is given to magnitudes, spectra, temperatures, stellar atmospheres, giant and dwarf stars, binary and variable stars, and the galaxies.

**GEOG. 354: HISTORICAL GEOGRAPHY OF THE UNITED STATES** 3 s.h.

The natural and cultural regions of pre-Columbian United States and the geography of settlement and regional development of the country to 1890. This course is very desirable for history majors.

**GEOG. 355: GEOGRAPHY OF THE SOVIET UNION** 3 s.h.

This regional study deals with Russia's location, size, surface features, climate, vegetation, soils, mineral wealth, occupations, production, transportation, and government. Russia's future production and economic political influence are considered.

**GEOG. 356: GEOGRAPHY OF EUROPE** 3 s.h.

A study of European landscapes and regions, which seeks to develop an understanding of the geographic basis of Europe's major economic and

social problems. Emphasis is upon western Europe; the Soviet Union is not included in this course. Recommended for majors in history and social science.

**GEOG. 357: GEOGRAPHY OF ASIA** 3 s.h.

A regional course stressing the interrelationship of the economic, social, and political life of the people with their spatial environment. Problems of over population, standards of living, natural resources, industry, and government are emphasized. The Soviet Union is not included in this course.

**GEOG. 404: URBAN GEOGRAPHY** 3 s.h.

A comparative study of the structural form and functioning of selected world cities from a geographic viewpoint, with insights into their origin and evolutionary patterns of institutional, commercial, industrial, and residential land use and linking transport-communication systems as dynamic processes of functional organization. Prerequisite: consent of the department chairperson.

**GEOG. 406: GEOGRAPHY OF INDUSTRIAL LOCATION** 3 s.h.

A study of the locational factors of industry and the plant site evaluations. New trends in manufacturing location will be measured and mapped. Specific studies of selected industries will be utilized to give practical application to the subject matter. Prerequisite: consent of department chairperson.

**GEOG. 408: RECREATIONAL GEOGRAPHY** 3 s.h.

A study of the nature and characteristics of outdoor recreation, emphasizing the interrelationship of natural and cultural features to leisure time activities. Major aspects of the course will stress demand, supply, and economic concepts of outdoor recreation. Analysis will be made of management, legislation, policies and programs affecting current and future recreational areas and activities. Prerequisite: consent of department chairperson.

**GEOG. 410: URBAN, RURAL and REGIONAL PLANNING** 3 s.h.

A study of the basic concepts associated with geographical planning within urban and rural areas as well as on a regional basis. Elements and theories of planning, methodologies and techniques of planning, design and implementation concepts of planning systems, and landscape design in relationship to planning systems will be an integral part of the course. Prerequisite: consent of department chairperson.

**E.S. 412: ENVIRONMENTAL GEOLOGY** 3 s.h.

A study of the uses of geology in the solution of man's problems with his physical environment. Topics include hazardous geologic environments, mineral and energy resources, water supply, waste disposal and the uses of geology in urban and regional planning. Many examples are drawn from western Pennsylvania. Prerequisite: consent of department chairperson.

**GEOG. 451: CARTOGRAPHY I** 3 s.h.

A systematic study of the basic concepts and components of thematic map making. Emphasis is placed upon familiarization with and utilization



of drafting instruments and equipment essential to map design and construction. Techniques of photographic reproduction of student map projects will also be presented. Two lectures and three hours of laboratory weekly. Prerequisite: Geog. 259 or consent of the department chairperson.

**GEOG. 452: GEOGRAPHY OF LATIN AMERICA** 3 s.h.

A comparative study of the geographical regions of Middle and South America. Latin American relations with the United States and the rest of the world are interpreted through an analysis of the economic, social, and cultural activities of man in relation to the physical factors of his environment.

**GEOG. 453: GEOGRAPHY OF AFRICA** 3 s.h.

A systematic and regional study of the continent of Africa. The major physical features of Africa are interrelated with African settlement and historical development. The economic and cultural characteristics of African countries are analyzed on a regional basis to include current political and social problems within each region.

**GEOG. 454: POLITICAL GEOGRAPHY** 3 s.h.

Geographic factors influencing the character, development, and functioning of political units, especially the national state. The internal areal structure and external relations of nation states are studied as factors of political power. Natural, cultural, and ethnic regions of political areas are brought into focus, including core areas and capitals, dependent areas and colonies, and the communication lines necessary to maintain them. Points and zones of international conflict are connected with the practice of great power politics and with problems of world peace. Recommended for majors in history and political science.

**GEOG. 455: CARTOGRAPHY II** 3 s.h.

A systematic study of the new dimensions of cartography in use today. Emphasis is placed upon the techniques used in the construction of three-dimensional maps and models of statistical surfaces, diagrams, cartograms, negative scribing, and color separation. Designing, programming, and constructing computer maps will also be a part of the course. Two lectures and three hours of laboratory weekly. Prerequisite: Cartography I and consent of the department chairperson.

**GEOG. 456: AERIAL PHOTO INTERPRETATION** 3 s.h.

A systematic study of aerial photographs for geographic investigations of physical and cultural features of the landscape; the application of remote sensing to topographic and planimetric map construction, agricultural and land use identification, landform study, and forestry. Prerequisite: permission of the department.

**GEOG. 459: FIELD GEOGRAPHY** 3 s.h.

A systematic study of the techniques essential to geographic field investigation. Emphasis is placed upon practical, first-hand experiences in the field where students learn the techniques and procedures of compass traversing, plane tabling, rural and urban land use surveying, and field research. Prerequisite: Cartography I and consent of the department chairperson.

# GERMAN

In addition to courses listed below, students of German have an opportunity to study for a summer, a term, or an entire academic year in Germany and/or Austria.

GER. 151: GERMAN I (ELEMENTARY I) 4 s.h.

Essentials of grammar with emphasis on aural comprehension and oral expression and extensive use of the language laboratory. Fall semester.

GER. 152: GERMAN II (ELEMENTARY II) 4 s.h.

Continuation of German 151, with increasing emphasis on graded reading material. Prerequisite: German 151 or permission of the instructor. Spring semester.

GER. 153: ELEMENTARY GERMAN CONVERSATION 3 s.h.

Conversational practice, with extensive oral drill or grammatical patterns. Designed for those students who have met the prerequisites for German 251 but are lacking in aural-oral proficiency. May be taken concurrently with German 251.

GER. 251: GERMAN III (INTERMEDIATE I) 3 s.h.

Brief systematic review of basic grammar; graded readings, conversation, translation, and composition on selected topics. Prerequisite: German 152 or two years of high school study and/or a satisfactory placement test score. Fall semester.

GER. 252: GERMAN IV (INTERMEDIATE II) 3 s.h.

Intensive reading of selected works; outside reading, with oral and/or written reports. Prerequisite: German 251 or three years of high school study and/or a satisfactory placement test score. Spring semester.

GER. 253: SCIENTIFIC GERMAN 3 s.h.

A study of scientific terminology and style, with extensive readings in various scientific fields. Prerequisite: German 251 or equivalent. Science and mathematics majors may substitute this course for German 252. Spring semester.

GER. 255: GERMANIC CIVILIZATION I 3 s.h.

A survey of German geography, history, literature, and culture, designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful, and integral part of a great civilization. Prerequisite: German 252 or four years of high school study and/or a satisfactory placement test score. Required of German majors. Fall, 1975, 1977.

GER. 256: GERMANIC CIVILIZATION II 3 s.h.

Continuation of German 255, which is prerequisite. Required for German majors. Spring, 1976, 1978.

GER. 257: EUROPEAN CULTURES I 3 s.h.

A presentation in English of Northern and Central European culture patterns, especially those of Scandinavia, the Low Countries, and the three

German-speaking countries. Modern ways of life in state and economy, family and education, work and leisure, literature, theatre, art, architecture, and music. Points of contact with American culture and preparation for educational travel are stressed.

GER. 258: EUROPEAN CULTURES II 3 s.h.

Continuation of German 257, which is not necessarily prerequisite. Spring, 1975, 1977.

GER. 260: THE GERMAN SHORT STORY 3 s.h.

A study of representative *Novellen* of the nineteenth and twentieth centuries. All readings and discussions in German. Offered once per academic year.

GER. 300: GERMAN LITERATURE IN TRANSLATION 3 s.h.

A study of representative German literary works, with particular emphasis on the characters and ideas which have influenced both German and other literatures. The course is conducted in English; no knowledge of German required; no prerequisites.

GER. 350: ADVANCED CONVERSATION AND INTERPRETATION 3 s.h.

Interpreting and translating skills, stressing everyday idioms and practical needs, especially for employment in government and industry.

GER. 351: ADVANCED GERMAN GRAMMAR AND COMPOSITION 3 s.h.

Intensive oral and written drill, with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-German translation, free composition, and conversation on everyday topics. Prerequisites: German 255 and 256 or one literature course. Fall, 1975, 1977.

GER. 352: SURVEY OF GERMAN LITERATURE THROUGH THE CLASSICAL AGE 3 s.h.

Study and discussion of the main trends of German thought and literary expression. Emphasis is placed upon the works of Goethe, Schiller, and Lessing.

GER. 353: THE MODERN GERMAN DRAMA 3 s.h.

German drama from the middle of the 19th Century to the present, covering representative writers of the Realist, Naturalist, and Expressionist movements, as well as selected contemporary writers.

GER. 354: THE MODERN GERMAN NOVEL 3 s.h.

The German novel of the last hundred years with emphasis on 20th Century writers such as Thomas Mann, Franz Werfel, Hermann Hesse, et al.

GER. 355: GERMAN ROMANTICISM 3 s.h.

The older and younger schools of German Romanticism (Jena, Berlin, and Heidelberg) with emphasis on the revival of folk poetry and consideration of influences upon American Romanticism. Representative authors: Hölderlin, Novalis, Arnim, and Brentano.

- GER. 358: CLASSICAL GERMAN LITERATURE: 3 s.h.  
 GOETHE, SCHILLER AND LESSING  
 Goethe's *Faust* and other great works of the Golden Age of German literature.
- GER. 360: CONTEMPORARY GERMAN PROSE 3 s.h.  
 Recent literary and linguistic developments in German prose style. The short story and news media as materials for training in oral expression and stylistics.
- GER. 361: GERMAN LYRIC POETRY 3 s.h.  
 The German lyric from Mörke, Hofmannsthal, Rilke, and George to the post-expressionist movement and contemporary poets such as Benn, Nelly Sachs, and Enzensberger.
- GER. 451: SUPERVISED READINGS IN 3 s.h.  
 GERMAN LITERATURE  
 This course is devoted to selected readings determined in relation to the needs and interests of the individual major.

## HEALTH AND PHYSICAL EDUCATION

The following courses are offered for fulfillment of the general education requirement for all students.

- HPE 111: HEALTH EDUCATION 2 s.h.  
 Consideration of the physical and mental equipment of the individual and of the practical application of health knowledge and concepts in personal, family, community, and environmental living. Special emphasis is placed in the areas of mental health, drug abuse, human sexuality and marriage, and the major diseases and health problems confronting society.
- HPE 131: BEGINNING SWIMMING 1 s.h.  
 HPE 132: INTERMEDIATE SWIMMING 1 s.h.  
 HPE 230: SENIOR LIFE SAVING 1 s.h.  
 HPE 231: ADVANCED AQUATICS FOR MEN 1 s.h.  
 HPE 232: ADVANCED AQUATICS FOR WOMEN 1 s.h.  
 HPE 233: SPRINGBOARD DIVING FOR MEN 1 s.h.  
 HPE 234: SPRINGBOARD DIVING FOR WOMEN 1 s.h.  
 HPE 235: CANOEING 1 s.h.  
 HPE 330: WATERSAFETY INSTRUCTOR 1 s.h.  
 HPE 140: ARCHERY 1 s.h.  
 HPE 141: BADMINTON 1 s.h.  
 HPE 142: BOWLING 1 s.h.  
 HPE 143: GOLF 1 s.h.  
 HPE 144: HANDBALL AND RACQUET PADDLEBALL 1 s.h.  
 FOR MEN  
 HPE 145: RACQUET PADDLEBALL FOR WOMEN 1 s.h.  
 HPE 146: SKIING 1 s.h.  
 HPE 147: TENNIS 1 s.h.

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| HPE 148: | WRESTLING AND WEIGHT TRAINING | 1 s.h. |
| HPE 151: | BASKETBALL FOR MEN            | 1 s.h. |
| HPE 152: | BASKETBALL FOR WOMEN          | 1 s.h. |
| HPE 153: | VOLLEYBALL FOR MEN            | 1 s.h. |
| HPE 154: | VOLLEYBALL FOR WOMEN          | 1 s.h. |
| HPE 161: | MODERN DANCE                  | 1 s.h. |
| HPE 171: | GYMNASTICS FOR MEN            | 1 s.h. |
| HPE 172: | GYMNASTICS FOR WOMEN          | 1 s.h. |
| HPE 173: | RHYTHMIC GYMNASTICS FOR WOMEN | 1 s.h. |

In the above activity courses basic skills and fundamental techniques are taught. Etiquette, sportsmanship, strategy, rules, and officiating are included in the course content where applicable.

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| HPE 181: | ADAPTED PHYSICAL EDUCATION | 1 s.h. |
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A modified or corrective physical education course for those who by reason of illness or disability are unable to participate in the more vigorous forms of physical education activities.

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| HPE 182: | POSTURE AND BODY MECHANICS | 1 s.h. |
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An overall analysis of the factors involved in correct posture and body mechanics with individually prescribed exercise programs to meet personal needs.

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| HPE 185: | PHYSICAL FITNESS AND CONDITIONING | 1 s.h. |
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This course enables students to develop a fitness and conditioning program to fit their individual needs through knowledge gained in areas such as nutrition, use of conditioning equipment, weight control, and fitness tests.

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| HPE 223: | PHYSICAL EDUCATION FOR<br>ELEMENTARY MAJORS | 1 s.h. |
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A course especially designed for Elementary Majors with emphasis upon activities related to the elementary school. Required for all men and women majoring in Elementary Education except for those students with an area of specialization in Health and Physical Education.

The following courses are offered for fulfillment of an area of specialization in Health and Physical Education for Elementary Education Majors.

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| HPE 112: | HEALTH EDUCATION IN THE<br>ELEMENTARY SCHOOL | 2 s.h. |
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A course based on the premise that health education is not a subject but rather a way of living. Special emphasis placed upon the development of sound principles and procedures in meeting the different needs of the child in relation to the school, home, and community. Elementary health courses of study form the basic point from which each student explores content and methods for making a sound total health education program. The interrelationship of health education with all fields in the modern elementary program is a focal point of attention.

**HPE 113: PRINCIPLES OF HEALTH EDUCATION & PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL 2 s.h.**

An orientation course designed to provide a study of Health Education and Physical Education in the Elementary School. Consideration is given to history, values, objectives, and recent emphasis.

**HPE 210: ANATOMY OF LOCOMOTION 3 s.h.**

A study of the human body with particular emphasis on the systems of the body necessary for movement as related to scientifically sound and practical programs of physical education.

**HPE 224: ELEMENTARY SCHOOL ACTIVITIES I 1 s.h.**

The analysis and practical application of basic movement patterns and skills. Physical fitness, exercise, stunts and tumbling, and self-testing activities are studied as a part of this course. This course is to be substituted for HPE 223 by elementary education majors selecting physical education as their area of specialization.

**THEORY AND TECHNIQUES OF COACHING**

**HPE 238: SWIMMING AND GOLF COACHING 2 s.h.**

**HPE 247: GYMNASTICS AND TENNIS COACHING 2 s.h.**

**HPE 248: WRESTLING AND BASEBALL COACHING 2 s.h.**

**HPE 250: FOOTBALL COACHING 2 s.h.**

**HPE 251: BASKETBALL COACHING 2 s.h.**

**HPE 254: VOLLEYBALL AND TRACK & FIELD COACHING 2 s.h.**

This sequence of courses is to promote development of skills, acquisition of knowledge, and understanding of theories as they relate to specific sports.

**HPE 310: ADAPTED PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL 2 s.h.**

The study and application of the modified or restricted activities to be provided at all grade levels for the child who may not safely participate in the regular instructional class period. Prerequisite: HPE 210.

**HPE 313: ORGANIZATION & ADMINISTRATION OF HEALTH EDUCATION & PHYSICAL EDUCATION 3 s.h.**

Procedures of program building in Health Education and Physical Education; curricular and extra-curricular, facilities and equipment, class procedures, and legal liability.

**HPE 324: ELEMENTARY SCHOOL ACTIVITIES II 2 s.h.**

Games of low organization, team games, individual and dual sports, aquatics, rhythms dance, classroom and recreational activities as they add their unique contribution to the physical and cultural development of the elementary school child. Emphasis on progression, skill development, and safety for each grade level.

**HPE 325: CAMPING AND OUTDOOR RECREATION 2 s.h.**

Practical experiences in the basic skills necessary for a successful camping experience and their application for the effective organization of

the elementary school camping program as it relates to and integrates with the total outdoor education movement.

**HPE 408: FOUNDATION OF ATHLETICS 3 s.h.**

An investigation and understanding of the interactional impact of sport upon the behavior of the athlete and coach, and their relationship with the culture and society.

**HPE 409: KINESIOLOGICAL FOUNDATIONS OF COACHING 3 s.h.**

A study of the mechanical movements used in the execution of skills and techniques of the various sports. These movements are identified and analyzed for their acceptance, correction, or improvement as they relate to the teaching of each sport.

**HPE 411: PHYSIOLOGICAL FOUNDATIONS OF COACHING 3 s.h.**

This course is a study of the scientific theories and principles underlying the role of flexibility, strength, muscular endurance, and cardio-respiratory endurance in training and conditioning for sports.

**HPE 412-512: SCIENTIFIC BASES OF ATHLETIC TRAINING 3 s.h.**

The application of scientific principles taken from the various science fields of anatomy, physiology, physics, and psychology to the field of athletic training and conditioning. Prerequisites: HPE 210 and 211.

**HPE 413: CURRENT TRENDS IN HEALTH EDUCATION AND PHYSICAL EDUCATION 1 s.h.**

Designed to aid the mature student in identifying, analyzing, and evaluating recent developments and critical issues in Health Education, Physical Education, and Recreation.

**HPE 414: THE FIRST AID AND SAFETY 2 s.h.**

The responsibilities and duties of the teacher in the development and teaching of programs in first aid and safety that are related to the students' school and community environment. The American Red Cross Standard First Aid course will be included.

## **HISTORY**

**HIST. 111: HISTORY OF ANCIENT AND MEDIEVAL CIVILIZATION 3 s.h.**

The course includes a survey of prehistoric cultures, the earliest civilizations, and European Medieval civilization to 1500. Its purpose is to present a knowledge of the origins of the broad social, political, intellectual, and economic movements of the past from which the student may gain an understanding of civilization today.

**HIST. 112: HISTORY OF MODERN CIVILIZATION 3 s.h.**

A study of significant movements and events from 1500 to the present. The course emphasizes the interrelationships between cultures of various

regions of the world, with major attention to the influence Western Europe development has exerted on other areas.

**HIST. 180: PROBLEMS IN WESTERN CIVILIZATION 3 s.h.**

This course utilizes an investigative approach to problems in the evolution of Western history. Such "problems" as the rise of nationalism, revolution, the growth of capitalism, etc., will be investigated. A different "problem" will be examined each time the course is offered. Students will be encouraged to develop specific focuses within the problem area. Special sections of English 111 and Speech 113 must be taken in conjunction with this course.

**HIST. 210: THE BLACK EXPERIENCE: A HISTORICAL AND CULTURAL APPROACH TO AFRICA AND AMERICA 3 s.h.**

This course is an interdisciplinary survey of the black experience in Africa and America. It is based on a series of lectures by visiting scholars coordinated by reading assignments, field trips, and class discussions.

**HIST. 213: HISTORY OF THE UNITED STATES 3 s.h.**

A survey of United States history from the period of exploration to the present.

**HIST. 215: EXPLORING THE AMERICAN SOCIAL FABRIC 3 s.h.**

A topical approach to the study of American history, permitting students to pursue an in-depth examination of selected problems. No prerequisites.

**HIST. 235: TOPICS IN EUROPEAN INTELLECTUAL HISTORY 3 s.h.**

A study of the major social, economic, and political ideas of Europe in the Eighteenth, Nineteenth, and Twentieth Centuries.

**HIST. 254: HISTORY OF LATIN AMERICA: COLONIAL PERIOD 3 s.h.**

This course surveys the development of Colonial Latin America from its discovery to 1825. The economic, social, cultural, and political aspects of native Indian, Spanish, and Portuguese civilizations in the Old and New World are given detailed attention.

**HIST. 255: HISTORY OF LATIN AMERICA: NATIONAL PERIOD 3 s.h.**

The main emphasis of this course is on the history of the twenty Latin American countries since 1825. The economic, social, political, and cultural development receives detailed attention. The course also surveys Latin America's international relations with emphasis on U.S.-Latin American relations.

**HIST. 256: HISTORY OF PENNSYLVANIA 3 s.h.**

A study of the founding and development of Pennsylvania from its colonial beginning to the present time. Emphasis is placed on the social, economic, and political development in the different periods of its history. Special attention is given to the diversity of the people, their institutions



and problems, and the growth of Pennsylvania to a leading position in our modern industrial world.

**HIST. 310: HISTORY OF THE ANCIENT GREEKS 3 s.h.**

The development of the Greek peoples from their first penetration into the Mediterranean Area until their governments passed under Roman administration.

**HIST. 311: HISTORY OF ROME TO A.D. 565 3 s.h.**

The History of the Romans from the context of the founding of their city, through the development of their unique concept of government and civilization during their Republic and Empire until the full emergence of the Byzantine culture.

**HIST. 320: MEDIEVAL HISTORY 3 s.h.**

A study of the Middle Ages from the fall of Rome to 1500.  
Prerequisite: Hist. 111 or consent of the instructor.

**HIST. 330: EUROPE DURING THE RENAISSANCE 3 s.h.**

A survey of the course of Europe's development from the thirteenth through the sixteenth centuries with emphasis on political, social, economic, and cultural trends and achievements and the problems of historical interpretation they pose.

**HIST. 335: EUROPE DURING THE REFORMATION 3 s.h.**

A survey of Europe's development during the sixteenth and seventeenth centuries with particular attention to the role of religion and religious issues and to the interaction between religion and political, economic and cultural affairs.

**HIST. 340: HISTORY OF EUROPE FROM 1660 TO 1814 3 s.h.**

A study of the social, economic, political, religious, and cultural experiences of the European people from the Age of Louis XIV through the Napoleonic Wars.

**HIST. 345: HISTORY OF EUROPE FROM 1815 TO 1924 3 s.h.**

A study of the social, economic, political, religious, and cultural experiences of the European people from the Congress of Vienna to the death of Lenin.

**HIST. 354: CONTEMPORARY AMERICAN HISTORY 3 s.h.**

A study of the political, social and economic developments and foreign affairs of the U. S. from World War I to the present.

**HIST. 355: ECONOMIC HISTORY OF THE UNITED STATES 3 s.h.**

A survey of the economic history of the United States and a study of the relationship of the economic and the political and social factors in the development of America. Prerequisite: Hist. 213.

**HIST. 356: CONTEMPORARY EUROPEAN HISTORY 3 s.h.**

In this course the diplomatic background, the testing of the alliances, World War I, and the results of the Treaty of Versailles are emphasized. The various ideologies of government and economics are examined. Europe is placed in its proper setting of world significance.

HIST. 357: HISTORY OF ENGLAND TO 1689 3 s.h.

A comprehensive course in the History of England to the time of the Glorious Revolution.

HIST. 358: HISTORY OF ENGLAND SINCE 1689 3 s.h.

A comprehensive course in the cultural, political, and economic history of modern England.

HIST. 359: HISTORY OF THE AMERICAN FRONTIER 3 s.h.

This course includes the geographic continuity of westward expansion, and the significance of the frontier in the development of the U. S.

HIST. 361: HISTORY OF AMERICAN SCIENCE  
AND TECHNOLOGY 3 s.h.

This course places emphasis on the historical survey of the development of American science and technology and of their effect on the growth of America's culture. America's contributions to the rest of the world along the lines of science and technology are stressed.

HIST. 362: HISTORY OF AFRO-AMERICA 3 s.h.

A survey of Afro-American history from its African beginnings to contemporary times (1969). Special emphasis will be placed on tracing the role of the Negro in American History in order to develop a better perspective of his contribution to the American way of life. A close study will be made of the junctures of American History where the problems of the Afro-American took on new meaning in American growth. Prerequisite: History 213 — the survey course in American History.

HIST. 365: RUSSIA TO THE TWENTIETH CENTURY 3 s.h.

Russia's development from the early centuries of the Christian era to the present century. Stress on the period beginning with the reign of Peter the Great with special attention to the nineteenth and early twentieth centuries as background for the Soviet period.

HIST. 366: RUSSIA IN THE TWENTIETH CENTURY 3 s.h.

Russia's development in the twentieth century with major attention to Communism in theory and practice and emphasis on the role of the Soviet Union in world affairs.

HIST. 370: HISTORY OF THE NEAR EAST 3 s.h.

This survey is an area study of the early classical era by way of an advanced intensive exploration of the civilization in the Mediterranean East and the Middle East. After an introduction to the religion of Judaism and Christianity in their political setting, the cultural contributions of the Semites, Greeks, and Romans are examined. The Islamic Age is stressed. Emphasis is placed upon modern identification of the countries that make this an explosive part of the world — Jordan, Israel, Lebanon, Iran, Iraq, Arabia, Syria, Egypt, Turkey. Their relationship to the great powers is given attention.

HIST. 375: TRADITIONAL INDIA 3 s.h.

Examination of the historical development of Indian Civilization from its early origins to the coming of the Europeans, with emphasis on the

classical period, religion, social organizations, and the arts throughout the ancient Hindu and Medieval Moslem periods.

**HIST. 376: MODERN INDIA—PAKISTAN 3 s.h.**

Rise of the British power, its political, economic, and social impact; reaction to British rule; rise of Nationalism and reformist movements; social, political, and economic development since 1947.

**HIST. 385: MODERN SOUTHEAST ASIA 3 s.h.**

Different systems of Western colonial rule, with major emphasis on territorial expansion, political administration, and economic patterns; reaction to alien rule, rise of nationalism, and social, economic, and political problems since independence.

**HIST. 400: CONTEMPORARY ASIA SINCE  
THE FIRST WORLD WAR 3 s.h.**

An advanced elective course on the political and socio-economic changes in contemporary Asia and the emergence of free States, with particular emphasis on attempts to create stable democratic regimes.

**HIST. 439: U. S. HISTORY, NATIONAL PERIOD, 1783-1860 3 s.h.**

The development of the United States from the end of the Revolution to the Civil War. No prerequisites.

**HIST. 440: RISE OF INDUSTRIAL AMERICA AND THE  
SEARCH FOR ORDER: UNITED STATES  
1865-1919 3 s.h.**

A study of economic, social, political, and cultural changes in American life from Reconstruction through World War I. No prerequisites.

**HIST. 452: AMERICA AS A WORLD POWER 3 s.h.**

A study of American diplomatic history from 1789 to the present. The course traces the development of major foreign policies and studies the national and international factors which influence and determine these policies. Prerequisite: Hist. 213.

**HIST. 453: TOPICS IN TWENTIETH CENTURY  
WORLD HISTORY 3 s.h.**

The significance of events in the present century is brought out in this course by a study of the growth of capitalism, imperialism, totalitarianism, international jealousies, World Wars I and II, and the attempt of the family of nations to find world peace through international understanding.

**HIST. 454: THE BRITISH EMPIRE AND  
COMMONWEALTH OF NATIONS 3 s.h.**

An advanced elective course on the formation and career of the British Commonwealth.

**HIST. 455: THE CULTURE OF EUROPE  
(EDUCATIONAL TOUR) 6 s.h.**

Recent history and government of selected countries of Europe is stressed. Emphasis is placed upon England, Holland, Germany, Switzerland, Italy, and France as the educational tour develops into the foreign study program. In alternate years the countries of the Balkans, Greece and

Turkey, and the countries of Scandinavia, Finland, Sweden, Denmark, and Norway are emphasized. English and German literature, the art and architecture of the Renaissance in Northern Italy, and the agricultural-industrial economy of France, receive intensive study. Geographical bases of cultural developments are noted. Recent developments in science, politics, and economics receive attention. The main term paper stems from a problem or project or discovery as observed by each student. This paper is due within 60 days upon the ending of the summer session class abroad.

**HIST. 456: SOCIAL AND INTELLECTUAL HISTORY  
OF THE U. S. TO 1865 3 s.h.**

The major social and intellectual movements in the United States from 1607 to 1865. Emphasis is put on reading in primary sources.

**HIST. 457: SOCIAL AND INTELLECTUAL HISTORY  
OF THE U. S. SINCE 1865 3 s.h.**

The major social and intellectual movements in the United States from 1865 to present. Emphasis is put on reading in primary sources.

**HIST. 458: ENGLISH CONSTITUTIONAL HISTORY 3 s.h.**

A consideration of Constitutional government in England from the beginning of English history to the present. The study of governmental powers, political and judicial process, and the relationship of liberty and authority to the individual living under the government is included.

**HIST. 461: COLONIAL AMERICA 3 s.h.**

A study of colonial history beginning with the European background of colonization and continuing through the American Revolution. Prerequisites: Hist. 213 or consent of the instructor.

**HIST. 462: AMERICAN WESTWARD EXPANSION (1803-1950) 3 s.h.**

This course traces the American westward movement through the trans-Mississippi West and includes the American move into the Pacific island area in the 19th and 20th centuries. Emphasis is placed on the explorations and successive penetrations of the Far West and the Pacific Island frontiers and the developments of the United States power position in the Pacific. The impact of this great move westward on American political, social, and economic institutions is studied in detail. Research papers required of students may fall in either the 19th or 20th century phase of the course.

**HIST. 463: CIVIL WAR AND RECONSTRUCTION 3 s.h.**

This course is a basic study of the growth of sectional differences between North and South from 1820 to 1850. It further examines the failure of compromise efforts in the 1850's and the causes of secession. The war and the consequences of reconstruction policies to 1877 are traced in light of modern civil rights problems.

**HIST. 464: MINORITIES, PREJUDICE, AND BIGOTRY  
IN AMERICAN HISTORY 3 s.h.**

A study of the nature and causes of prejudice in American History and a review of the impact of prejudice on American society. Prerequisite: History 213 or the consent of the instructor.

**HIST. 467: LATIN AMERICA & ITS WORLD RELATIONS 3 s.h.**

This course is a survey of Latin America's inter-relationships with other world areas. It includes Latin America's place in world politics, its position in the international economic sphere, and its society and culture in a world context. Special emphasis is placed on U. S.—Latin American relations.

**HIST. 471: THE FRENCH REVOLUTION 3 s.h.**

The Old Regime and its critics of the 18th century will be examined; the social and political changes in France from 1789 to 1815 will be analyzed; the diplomatic and international influence of the French Revolution will be surveyed.

## **LIBRARY MEDIA AND INFORMATION SCIENCE**

**L.S. 255: INTRODUCTION TO MEDIA LIBRARIANSHIP 3 s.h.**

Broad overview of libraries and library media centers and the profession of librarianship beginning with the history of libraries and concluding with the impact of technology on libraries.

**L.S. 256: ADMINISTRATION OF SCHOOL LIBRARIES 3 s.h.**

Study of the objectives and functions of the school library with emphasis on the concept of an instructional materials center. Technical and administrative procedures, budget preparation, personnel, space and equipment. Acquisition, preparation, and circulation of all forms of materials. Maintenance of the collection. Standards for evaluation of school libraries. Relations with other school libraries and the public library. The development of a functional school library program.

**L.S. 257: BASIC REFERENCE SOURCES AND SERVICES 3 s.h.**

Emphasis on the approaches to locating information. The criteria for selection of reference materials and the examination of reviewing media for new reference aids. Organization of reference service. The study of a selected list of reference works. Recommended as an elective for non-library science students.

**L.S. 258 SELECTION OF LIBRARY MATERIALS 3 s.h.**

Familiarity with basic bibliographical tools, including current reviewing media and the book trade. The establishment of policies and criteria for the selection and evaluation of book and non-book materials. Prerequisite to L.S. 356 and L.S. 358.

**L.S. 260: DEVELOPMENT AND ADMINISTRATION  
OF LIBRARIES 3 s.h.**

The development of the library as an institution. The concept of philosophy of librarianship. General principles of administration and their application to the organization and management of different types of libraries. Problems and practices with respect to a library's function, staff, collections, and building.

**L.S. 356: LIBRARY MATERIALS FOR YOUNG PEOPLE 3 s.h.**

Survey of young people's literature and related materials. Study of the reading interests of boys and girls of high school age, the characteristics of appropriate books, and methods of introducing young people to books. Techniques of preparing and delivering book talks and book reviews. Prerequisite: L.S. 258 or permission of the instructor.

**L.S. 357 CATALOGING AND CLASSIFICATION 3 s.h.**

Organization of print and non-print materials for effective service. Principles and methods of descriptive cataloging. The structure and application of the Dewey Decimal Classification, the Library of Congress Classification, and standard subject authority lists. The use of printed cards and the utilization of other work simplification techniques. The study of filing rules. Maintenance of library catalogs — shelf list, divided and dictionary card catalogs, and the printed book catalog.

**L.S. 358: LIBRARY MATERIALS FOR CHILDREN 3 s.h.**

Survey of children's literature and related materials. A study of the principles of selection and evaluation of books, periodicals, and other materials for children. Reading guidance, with attention to materials for special groups. Development of general and subject bibliographies, preparation of annotations. Techniques of story-telling and the selection of materials for the story hour. Prerequisite: L.S. 258 or permission of the instructor.

**L.S. 359: CURRICULUM ENRICHMENT 3 s.h.**

Planning for the effective use of school library services and materials in cooperation with the instructional staff. Examination of school library philosophies and educational objectives. Development of a library program course of study incorporating desirable library study skills and attitudes for grades K-12. Experience in the preparation of effective lesson plans including activities and resources for instruction. Activities which re-examine the role of the librarian as curriculum worker, media specialist, library administrator, teacher, advisor, and stimulator of reading activities. Prerequisites: L.S. 256, 257, 258, either 356 or 358, and Comm. 240.

**L.S. 432: COLLOQUIUM no credit**

A series of lectures, discussions, and film demonstrations, presented by visiting lecturers and members of the staff. Required of all students.

**L.S. 457: INDEPENDENT STUDY/SEMINAR 1-3 s.h.**

Opportunity to explore in depth a facet of librarianship according to need or interest, under the direction of a faculty member of the division. Special area to be approved by a faculty committee. Development of research techniques. The preparation of a scholarly paper or completion of a special project.

# MATHEMATICS

- MATH. 111: BASIC MATHEMATICS FOR ELEMENTARY TEACHERS** 3 s.h.  
 Structure of the real number system. Elementary set theory. Open to elementary education majors only.
- MATH. 112: BASIC MATHEMATICS** 3 s.h.  
 An introduction to some of the basic concepts of contemporary algebra. Topics include: sets, numbers, language of algebra, equations and inequalities, exponents, radicals, relations and functions.
- MATH. 130: PRACTICAL MATH** 3 s.h.  
 An introduction to basic algebraic concepts, review of algebraic and mathematical manipulation, emphasis on individual attention. (Credit will NOT be awarded for both Math. 130 and Math. 112.)
- MATH. 131-2: MATHEMATICS FOR BUSINESS & ECONOMICS I & II** 3 s.h. each  
 Mathematical techniques with special applications in business and related areas. Topics include: matrices, linear programming, probability, methods of calculus, and business statistics. Prerequisite: two years of high school mathematics.
- MATH. 151: COLLEGE ALGEBRA** 3 s.h.  
 Polynomials, equations and inequalities, exponents and radicals, logarithms. Prerequisite: 1 year of high school algebra and 1 year of high school geometry.
- MATH. 152: TRIGONOMETRY** 3 s.h.  
 Properties of trigonometric functions and their inverses.
- MATH. 171: PRECALCULUS** 4 s.h.  
 Review of high school algebra, inequalities, analytic trigonometry, logarithms, elementary theory of equations, complex numbers, and mathematical induction. Prerequisite: 2 years of high school mathematics.
- MATH. 172: CALCULUS WITH ANALYTIC GEOMETRY I** 4 s.h.  
 Elementary analytic geometry, limits, continuity, differentiability. Prerequisite: Math. 171 or equivalent.
- MATH. 211: MODERN CONCEPTS OF MATHEMATICS FOR ELEMENTARY TEACHERS** 3 s.h.  
 Real number system, introduction to elementary abstract algebra, set theory. Prerequisite: Math. 111.
- MATH 212: GEOMETRY FOR ELEMENTARY TEACHERS** 3 s.h.  
 An intuitive overview of geometry; axiomatic structure of geometry; basic constructions, proofs. Prerequisite: Math. 111.
- MATH. 213: ANALYSIS FOR ELEMENTARY TEACHERS** 3 s.h.  
 An elementary introduction to the basic properties of the real number system and the calculus, including functions, sequences, limits, continuity, integrals, and derivatives. Prerequisites: Math. 211.

**MATH. 214: FINITE MATHEMATICS FOR  
ELEMENTARY TEACHERS** 3 s.h.

An introduction to the basic properties of finite mathematics, including partitions of sets, counting theorems, permutations, combinations, probability. Prerequisite: Math. 211.

**MATH. 215: MATHEMATICAL CONCEPT LABORATORY –  
AN ACTIVITY ORIENTED APPROACH** 3 s.h.

Development of certain concepts of mathematics using an activity oriented approach. Class is conducted in a laboratory atmosphere. Topics considered are the rational number system, number theory, induction, measurement, geometric shapes. Prerequisite: Math. 111.

**MATH. 221: STATISTICS WITH APPLICATIONS** 3 s.h.

Basic principles and methods of statistical analysis useful in the social sciences, biology, and education, designed specifically for students not majoring in mathematics. (Not open to mathematics majors.)

**MATH. 271: CALCULUS WITH ANALYTIC GEOMETRY II** 4 s.h.

Review of limits, definition of Riemann integral and applications. Integration techniques; topics in analytic geometry. Prerequisite: Math. 172.

**MATH. 272: CALCULUS WITH ANALYTIC GEOMETRY III** 4 s.h.

Basic properties of limits, continuous and differentiable functions. Sequences, series, solid analytic geometry, functions of several variables, multiple integrals. Prerequisite: Math. 271.

**MATH. 350: ORDINARY DIFFERENTIAL EQUATIONS** 3 s.h.

First order differential equations. Linear differential equations of higher order; systems of differential equations. Series methods. Prerequisite: Math. 272.

**MATH. 352: PROBABILITY** 3 s.h.

Basic concepts of elementary probability; probability in finite sample spaces; conditional probability; independent trials; sophisticated counting; probability in relation to random variables. Prerequisite: Math. 272.

**MATH. 355: HISTORY OF MATHEMATICS** 3 s.h.

Study of the growth of mathematics through the centuries and the men who contributed to it. Prerequisite: Math. 272.

**MATH. 357: MODERN GEOMETRY** 3 s.h.

Axiomatic treatment of topics in geometry. Prerequisite: Math. 272.

**MATH 360, 361: NUMERICAL METHODS IN  
MATHEMATICS I, II** 3 s.h. ea.

Computer programming of algorithms, error, calculus of finite differences, numerical evaluation of integrals, algorithms for the solution of algebraic equations, and systems of algebraic equations with applications to selected problems. Prerequisite: Math. 272.

**MATH. 369: BOOLEAN ALGEBRA** 3 s.h.

An introduction to the theory of Boolean Algebra, with applications to



the theory of sets, logic, and electro-mechanisms. Prerequisite: Math. 272 or permission of instructor.

**MATH. 370: INTRODUCTION TO LINEAR ALGEBRA** 3 s.h.

Introduction to vector spaces, linear transformations, matrices, determinants, and related topics. Prerequisite: Math. 272.

**MATH. 371, 372: MODERN ALGEBRA I,II** 3 s.h.

An introduction to groups, rings, integral domains and fields. Prerequisite: Math. 272.

**MATH. 454: THEORY OF NUMBERS** 3 s.h.

Factorization, congruence, quadratic reciprocity. Number theoretic functions, diophantine equations, continued fractions. Prerequisite: Math. 272.

**MATH. 456: MATHEMATICAL STATISTICS** 3 s.h.

Mathematical expectation; discrete and continuous random variables; probability densities; sampling distributions; point estimations; interval estimation; tests of hypotheses; regression and correlation; analysis of variation; moment-generating functions. Prerequisites: Math. 352 and 272.

**MATH. 471, 472: ADVANCED CALCULUS I,II** 3 s.h. ea.

Limits, continuity, differentiability, integrability and convergence for functions of a real variable and of several variables. Prerequisite: Math. 272.

**MATH. 473: ELEMENTARY TOPOLOGY** 3 s.h.

Topological spaces, metric spaces, compactness, connectedness. Prerequisite: Math. 272.

**Math. 480: TOPICS** 3 s.h.

To permit offering special topics reflecting the interests of the students. The specific topic to be covered each term will be announced in advance. Prerequisite: Math 272 and permission of the instructor.

**MATH 490, 491, 492: HONORS SEMINAR I, II, III** 1 s.h. ea.

Selected topics in mathematics. Open only to students selected by the departmental seminar committee.

**MATH. 499: INDEPENDENT STUDY** 1-3 s.h.

Individual study under faculty supervision. Prerequisite: 12 hours of Math numbered 300 or above and written consent of the department chairman.

## MILITARY SCIENCE

**MS 101: WORLD MILITARY HISTORY** 2 s.h.

A study of land and sea war, including the relationship of strategy and tactics to geography, economics, sociology, and technology through the ages; the relationship between members of the Armed Forces and the public; evolution of warfare including the principles of war and weapons and equipment associated therewith. Also, see Leadership Laboratory.

## MS 102: AMERICAN MILITARY HISTORY 2 s.h.

A study of the development of American military institutions, policies, experiences, and traditions in peace and war from colonial times to the present. Emphasis is on the relationship between the military and other aspects of American society and the role of the military in the establishment, expansion, preservation, and development of the nation. Also, see Leadership Laboratory.

MS 203: FUNDAMENTALS OF TACTICAL  
OPERATIONS WITH APPLIED TERRAIN  
ANALYSIS AND MILITARY TOPOGRAPHY 2 s.b.

The structure, personnel, and equipment resources, and mission capabilities of unit level combat teams are studied and applied to various types of combat operations with emphasis on terrain analysis and military map usage. Also, see Leadership Laboratory.

## MS 204: NATIONAL SECURITY &amp; CONCEPT OF FORCE 2 s.h.

A survey of the broad spectrum of national resources and their relationship to the development of national power; tangible elements including geography, population, economic and military forces, intangible elements of social organization, ideology, and political systems. The role which military power plays in preserving the nation's freedoms; organization for U. S. national defense to include the magnitude of management implications. Also, see Leadership Laboratory.

|         |   |        |
|---------|---|--------|
| MS 305: | LEADERSHIP AND THE MILITARY<br>TEACHING/LEARNING RELATIONSHIP | 3 s.h. |
|---------|---|--------|

A study in the practical application of the principles of Leadership/Management as applied in the classroom and the field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to small units. Also, see Leadership Laboratory.

## MS 306: ADVANCED LEADERSHIP AND MANAGEMENT 3 s.h.

An analysis of the leader's role in directing and coordinating the efforts of individuals and small units in the execution of offensive and defensive tactical missions, to include command and control systems, the military team, and intelligence gathering. Also, see Leadership Laboratory.

|         |  |        |
|---------|--|--------|
| MS 407: | THEORY & DYNAMICS OF THE MILITARY TEAM | 3 s.h. |
|---------|--|--------|

Study of combat operations and the various military teams to include logistics as it applies to task force supply and movement and the planning and coordination necessary between the elements of Division Trains and the Task Force. Also, see Leadership Laboratory.

MS 408: SEMINAR IN MILITARY ANALYSIS  
AND MANAGEMENT 3 s.h.

A contemporary analysis of the use of the military in world affairs to include the importance of strategic mobility and neutralization of insurgent movements. Selected management problems and situations will be presented as they relate to military justice, administration, and the obligation and responsibilities of an officer. Also, see Leadership Laboratory.

## MS 999 LEADERSHIP LABORATORY

A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, it provides for articulation of students from the basic experience and development of the individual to the application of responsibilities and professional experience in a meaningful environment.

## MUSIC

### MUS. 111: INTRODUCTION TO MUSIC 3 s.h.

An introductory course designed to provide a basic orientation to the enjoyment and understanding of music. Use is made of recordings, concerts, and other media. No prerequisite courses or special abilities required.

### MUS. 112: INTRO. TO AFRO-AMERICAN MUSIC 3 s.h.

An introductory course designed to provide a basic orientation to the enjoyment and understanding of Afro-American music. Use is made of recordings, films, and concerts. No prerequisite.

### MUS. 131: LITERATURE AND MATERIALS OF MUSIC I (ELEMENTARY) 3 s.h.

The basic vocabulary of music fundamentals: notation, scale structures, intervals, triads and seventh chords, rhythm and meter, phrase and cadence, overtone series, modulation, introductory study of two-and-three part forms, etc. No prerequisite.

### MUS. 132: LITERATURE AND MATERIALS OF MUSIC II (ELEMENTARY) 3 s.h.

A study of recent methods and materials for teaching music in the elementary grades. Emphasis on development of reading ability. Includes drills in sight-singing and melodic dictation. Also includes an introduction to music of various historical periods and styles. Prerequisite: Mus. 131.

### MUS. 135: THEORY OF MUSIC I 4 s.h.

Review of basic properties and notation of tone. Tonality, chord structure and texture. Functions of primary and secondary triads. Chord progressions. Melodic and harmonic cadences. Harmonization and voice leading. First and second inversion chords. Formal characteristics of melody. Embellishing tones. Introduction to harmonic, melodic and rhythmic ear training, dictation and sightsinging. For music majors or by permission.

### MUS. 136: THEORY OF MUSIC II 4 s.h.

Continuation of Theory of Music I. Further aspects of harmony: diatonic seventh chords, secondary dominants, mutated chords, harmonic sequence. Further discussion of melodic and harmonic cadences. Modulation and mutation. Introduction to binary and ternary forms. Further development of ear training, dictation, and sightsinging. For music majors or by permission. Prerequisite: Mus. 135.

MUS. 151: HISTORY AND LITERATURE OF MUSIC I  
ANTIQUITY TO 1600 3 s.h.

Music before the Middle Ages: Greece, Rome, Byzantium. Medieval music: Gregorian Chant, secular forms. Early polyphony; music of the 13th century. Ars Nova in France and Italy. English and Burgundian schools: Burgundian Chanson, motet, Mass. Renaissance music: social conditions; Netherlands Chanson, motet, Mass; Venetian, French, German, Spanish, and English music of the Renaissance. The Late Renaissance: Lutheran Chorale; Psalter; Anglican Church music; Palestrina, Victoria, Di Lasso, Byrd. English keyboard music; Gabrieli and instrumental music. For music majors or by permission.

MUS. 152: HISTORY AND LITERATURE OF MUSIC II  
BAROQUE AND CLASSIC: 1600-1800 3 s.h.

Comparison of Renaissance and Baroque music; Early Baroque in Italy; Early and Middle Baroque in Northern countries; Middle Baroque in Italy; French music under absolutism; English music during Commonwealth and Restoration; Late Baroque in Italy and France; fusion and co-ordination of national styles; social conditions; Rococo; the Viennese classic period; style and form in Viennese classic music: Haydn, Mozart. For Music majors, or by permission. Prerequisite: Music 151.

MUSICAL ORGANIZATION CATALOG NUMBERS

|           |                     |        |
|-----------|---------------------|--------|
| MUS. 149: | GOSPELIERS          | 0 s.h. |
| MUS. 150: | OPERA WORKSHOP      | 0 s.h. |
| MUS. 153: | CONCERT CHOIR       | 0 s.h. |
| MUS. 154: | MADRIGAL SINGERS    | 0 s.h. |
| MUS. 155: | ORCHESTRA           | 0 s.h. |
| MUS. 156: | SYMPHONIC BAND      | 0 s.h. |
| MUS. 157: | MARCHING BAND       | 0 s.h. |
| MUS. 158: | BRASS CHOIR         | 0 s.h. |
|           | BRASS ENSEMBLE      | 0 s.h. |
|           | CLARINET CHOIR      | 0 s.h. |
|           | PERCUSSION ENSEMBLE | 0 s.h. |
|           | STRING ENSEMBLE     | 0 s.h. |
|           | WOODWIND CHOIR      | 0 s.h. |
|           | WOODWIND ENSEMBLE   | 0 s.h. |

APPLIED MUSIC

Individual instruction in voice, piano, strings, woodwinds, and brass. Stress is placed on the development of an attitude of artistic maturity on the part of the student, and upon artistic performance at all levels of proficiency. Admission by audition and permission of instructor and department chairman. Prerequisite: Mus. 131 or equivalent background. Course numbers are listed below.

|           |                    |        |
|-----------|--------------------|--------|
| MUS. 160: | PIANO CLASS I      | 1 s.h. |
| MUS. 161: | PIANO CLASS II     | 1 s.h. |
| MUS. 162: | VOICE CLASS I      | 1 s.h. |
| MUS. 163: | VOICE CLASS II     | 1 s.h. |
| MUS. 164: | VIOLIN, VIOLA      | 1 s.h. |
| MUS. 165: | CELLO, STRING BASS | 1 s.h. |

|           |                                     |        |
|-----------|-------------------------------------|--------|
| MUS. 166: | FLUTE, OBOE, SAXOPHONE              | 1 s.h. |
| MUS. 167: | CLARINET, BASSOON                   | 1 s.h. |
| MUS. 168: | TRUMPET, FRENCH HORN, BARITONE HORN | 1 s.h. |
| MUS. 169: | TROMBONE, BARITONE HORN, TUBA       | 1 s.h. |
| MUS. 170: | PERCUSSION                          | 1 s.h. |
| MUS. 171: | PIANO                               | 1 s.h. |
| MUS. 172: | VOICE                               | 1 s.h. |

|           |                           |        |
|-----------|---------------------------|--------|
| MUS. 231: | TEACHING MUSIC CREATIVELY | 3 s.h. |
|-----------|---------------------------|--------|

The various activities of the elementary music program (singing, listening, reading, moving, and playing of instruments) are approached through creative and experimental techniques which permit the child to learn with the body, mind, spirit, and through his whole personality. Each phase of the program should emerge as a vital creative activity. Prerequisites: Mus. 131 and 132.

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|-----------|--|--------|
| MUS. 232: | KEYBOARD SKILLS FOR<br>ELEMENTARY TEACHERS | 3 s.h. |
|-----------|--|--------|

Various styles of accompaniment for rote playing or sight reading of classroom and community songs. Emphasis upon the development of technical skills, reading facility, and memorization. Prerequisite: Mus. 131 or equivalent background.

|           |  |        |
|-----------|--|--------|
| MUS. 233: | SONG LITERATURE FOR<br>ELEMENTARY TEACHERS | 3 s.h. |
|-----------|--|--------|

A further study of the materials used in music education in the elementary school, including a review of the song material available in various music series textbooks and vocal command of this material. Emphasis will be on the criteria for choosing song material to illustrate various musical concepts, along with guidelines for music curriculum development. Prerequisites: Music 131 and 132.

|           |                     |        |
|-----------|---------------------|--------|
| MUS. 235: | THEORY OF MUSIC III | 4 s.h. |
|-----------|---------------------|--------|

Continuation of Theory II. Further aspects of harmony; ninth, eleventh, thirteenth, embellishing diminished, Neapolitan, and augmented sixth chords. Aspects of tonal structure and form. Thematic development in two-voice counterpoint. The rondo and sonata-allegro forms. Advanced ear training, dictation, and sightsinging. For music majors or by permission. Prerequisite: Mus. 136.

|           |                    |        |
|-----------|--------------------|--------|
| MUS. 236: | THEORY OF MUSIC IV | 4 s.h. |
|-----------|--------------------|--------|

Continuation of Theory III. Investigation of enriched tonal resources through chromaticism, modality, and modulation. Melodic, harmonic, formal, and contrapuntal processes and analytical techniques in twentieth century music. Discussion of the fugue and the variation forms. Advanced ear training, dictation, and sightsinging. For music majors or by permission. Prerequisite: Mus. 235.

|           |  |        |
|-----------|--|--------|
| MUS. 251: | HISTORY AND LITERATURE OF MUSIC III.<br>BEETHOVEN, AND THE ROMANTIC PERIOD:<br>1800-1890 | 3 s.h. |
|-----------|--|--------|

Beethoven: life and character; Beethoven's music. Romanticism:

historical perspective; social conditions; painting and literature. Vocal music; instrumental music; opera and music drama. The national schools: Russia; Bohemia; Scandinavia; France; England; Spain; American music. For Music majors, or by permission.

**MUS. 252: HISTORY AND LITERATURE OF MUSIC IV.  
CONTEMPORARY MUSIC:  
1890 TO THE PRESENT**

3 s.h.

The late romantics; impressionism; Stravinsky; Bartok; Hindemith; neo-classicists; nationalists; Soviet realism; neo-romantics; 12-tone composers; expressionism serial; music; Schoenberg; Berg; Webern, etc.; experimentalists, electronic music; Stockhausen, Boulez, etc. American music from the late 19th century to the present. For Music majors, or by permission.

**MUS. 253: BASIC HARMONY FOR  
ELEMENTARY TEACHERS**

3 s.h.

Aspects of chord connection and voice-leading in four-part writing. Primary and secondary triads and their inversions; seventh chords; non-harmonic tones; simple modulation. Harmonic analysis of representative music examples to determine creative practices of composers of various periods. Prerequisite: Mus. 131 or equivalent musical background.

**MUS. 255: EAR TRAINING AND SIGHT SINGING**

3 s.h.

Training and practice in melodic, rhythmic, and harmonic dictation to develop ability to identify, understand, and write what is heard. Emphasis on singing at sight from a score and on aural analysis of melody and harmony. Prerequisite: Mus. 131.

**MUS. 256: KEYBOARD HARMONY**

1 s.h.

A practical application at the keyboard of the essentials of harmony, designed to help the student develop a sense of good chord progression and to master extempore keyboard harmonization, transposition, and improvisation. Prerequisites: Mus. 131 or 135, plus 2 semesters of applied piano.

**MUS. 257: HISTORY OF MUSIC I**

3 s.h.

A study of western music from its origins in Hebrew and Greek cultures through the development of plainsong and polyphony to Haydn and Mozart. Analysis of styles and techniques employed by various composers and of concurrent trends in the other arts. No prerequisite.

**MUS. 258: HISTORY OF MUSIC II**

3 s.h.

A continuation of Mus. 257. A survey of 19th and 20th century music from Beethoven to the present, emphasizing development and experimentation throughout the twentieth century. Mus. 257 desirable but not required.

**MUS. 259: BAND AND ORCHESTRA INSTRUMENTS**

3 s.h.

The construction, tone quality, range, and special uses of each instrument in solo capacity or as part of the orchestra or band. Practical work includes learning to play and to demonstrate the various instruments, with emphasis on fundamental techniques.

MUS. 260: VOCAL PEDAGOGY 1 s.h.

Systematic study of the physical nature and function of the vocal instrument and breathing process and how they relate to the fundamental principles of teaching vocal technique. Application of this knowledge to the principles of vocal production and technique through lectures, demonstration and discussion, as well as group participation in instructing each other. Prerequisite: Voice Class I and II.

#### INSTRUMENTAL TECHNIQUES

This sequence of courses is designed to acquaint the music education major with a basic knowledge of the instruments commonly used in bands and orchestras. Sufficient technique must be developed by each student to enable him to introduce these instruments successfully to beginners in elementary or secondary school instrumental programs. Includes proper methods of tone production, fingerings, bowing techniques, embouchure and breath control, selection and purchase of instruments for school use, care and maintenance of instruments, selection, care, and adjustment of reeds or strings, storage of instruments, methods used in instruction of the instrument, and historical aspects of each family of instruments. For Music majors or by permission.

MUS. 261: INSTRUMENTAL TECHNIQUES I:  
VIOLIN, VIOLA 1 s.h.

MUS. 262: INSTRUMENTAL TECHNIQUES II:  
CELLO, STRING BASS 1 s.h.

MUS. 263: INSTRUMENTAL TECHNIQUES III:  
FLUTE, OBOE, SAXOPHONE 1 s.h.

MUS. 264: INSTRUMENTAL TECHNIQUES IV:  
CLARINET, BASSOON 1 s.h.

MUS. 265: INSTRUMENTAL TECHNIQUES V:  
TRUMPET, FRENCH HORN 1 s.h.

MUS. 266: INSTRUMENTAL TECHNIQUES VI:  
TROMBONE, BARITONE HORN, TUBA 1 s.h.

MUS. 267: INSTRUMENTAL TECHNIQUES VII:  
PERCUSSION 1 s.h.

MUS. 333: ELEMENTARY MUSIC METHODS 3 s.h.

The role of music in the elementary school; the roles of the classroom teacher, the music specialist, and the consultant. Plans, attitudes, and problems in teaching vocal and instrumental music; curriculum development. Evaluation of musical experience and growth in primary, intermediate, and upper elementary grades. Music reading as an integral part of the total music program. Musical growth and experience in singing, part-singing, listening, instrumental and rhythmic activities. Emphasis on development of ability to use the voice effectively in teaching, and on the thorough familiarity with music series texts, use of keyboard, rhythmic instruments, recordings, and new developments in teaching aids. Introduction to the Orff and Kodaly methods. Supervised teaching experience. For music majors only. Prerequisites: Mus. 135, 136.

**MUS 334: JUNIOR HIGH AND SECONDARY  
MUSIC METHODS**

3 s.h.

A critical study of the entire intermediate and secondary school music program; academic, vocal, and instrumental. Curriculum planning, motivation, evaluation, selection of materials and texts, audio visual aids, and effective teaching methods for the general music course and for elective courses in theory, history, and appreciation of music. Particular attention is given to the organization and development of both large and small vocal and instrumental groups: recruitment; selection of repertoire; performance levels; music rehearsal rooms and facilities; public performance and public relations. For Music majors only. Prerequisites: Music 135, 136.

**MUS. 351: KEYBOARD LITERATURE**

3 s.h.

A comprehensive survey of keyboard music from the Renaissance to the present. Representative works from each period are selected for careful study and analysis, with emphasis on performance practices as well as formal and stylistic elements in the music. Includes the development of various keyboard instruments. Prerequisites: Mus. 251, 252, or permission of instructor.

**MUS. 352: SYMPHONIC LITERATURE**

3 s.h.

An intensive study of orchestral music from the Baroque period to the present, using scores, live performances, and recordings with particular reference to performance practices and stylistic analysis. Prerequisites: Mus. 251, 252, or permission of instructor.

**MUS. 353: CHAMBER MUSIC LITERATURE**

3 s.h.

An intensive study of music written for small ensembles from the Renaissance period to the present. Representative works from each period will be selected for careful investigation and analysis. Performance by members of the class or by faculty groups will be used wherever possible. Prerequisites: Mus. 251, 252, or permission of instructor.

**MUS. 355: OPERATIC LITERATURE**

3 s.h.

A comprehensive survey of the entire field of operatic music from 1600 to the present, including 17th century Baroque opera; 18th century operatic reforms (Gluck and Mozart); opera in the 19th century (Verdi, Wagner, Strauss, and Puccini); 20th century trends in opera (Stravinsky, Berg, Britten, Menotti, etc.). Prerequisites: Mus. 251, 252, or permission of instructor.

**MUS. 356: CHORAL LITERATURE**

3 s.h.

A comprehensive survey of choral music from the fifteenth century to the present with emphasis on masses, motets, and madrigals of the Renaissance period; oratorios, cantatas, and passions of the Baroque period; major choral works of Haydn, Mozart, Beethoven, Berlioz, Mendelssohn, Verdi, and Brahms; choral works of the twentieth century. Prerequisites: Mus. 251, 252, or permission of instructor.

**MUS. 357: BAND LITERATURE**

3 s.h.

A comprehensive survey of the available published and recorded literature for marching, military, and concert bands, symphonic wind en-



sembles, and woodwind and brass chamber ensembles including transcriptions and arrangements; major publishers in the field; evaluation of various editions; and also a study of the principal trends of instrumental pedagogy, repertoire, and performance. Prerequisites: Mus. 131, 132.

**MUS. 361: PIANO TEACHING METHODS & MATERIALS 3 s.h.**

A comprehensive survey of modern piano teaching methods and available published teaching materials. Emphasis will be placed on the teaching of notation and the development of reading skills; the teaching of keyboard techniques through an understanding of the player's physical mechanism and the coordination of timing and touch; problems of fingering, pedaling, and memorization. Evaluation of materials for beginning students; easier teaching pieces by the great composers; anthologies; appropriate music for the intermediate student, leading to a more advanced technique and musicianship and to acquaintance with a wide range of composers and musical styles. Prerequisites: Mus. 151, 152; or Mus. 131 and permission of the instructor.

**MUS. 362: INSTRUMENTAL METHODS 2 s.h.**

Principles and procedures of organizing and conducting instrumental classes, bands, and orchestras in the public schools. Examination and use of texts, methods, and other materials. For Music majors or by permission.

**MUS. 363: VOCAL METHODS 2 s.h.**

Principles and procedures of organizing and conducting vocal classes and choral ensembles in the public schools. Vocal techniques, tone production, proper vowel placement, proper focus on tone, diction, diaphragmatic breathing, and investigation of choral literature. For Music majors or by permission.

**MUS. 364: COMPOSITION 3 s.h.**

A study of the nature of the musical idea and of the various possibilities of its subsequent development, including canonic or fugal treatment, motivic development, and variational procedures. A review of traditional structural plans and of contemporary formal and stylistic trends. Creative assignments emphasize the understanding of past and present compositional styles and techniques and the gradual development of a personal language. Prerequisites: Mus. 135, 136, or permission of instructor.

**MUS. 365: CONDUCTING I 2 s.h.**

Designed to develop skilled baton technique and clarity of gesture, effective rehearsal techniques, understanding of performance problems involving tonal balance, tempo, complex rhythmic situations, especially as related to intermediate and secondary school instrumental groups. Traditional and modern beat patterns; expressive gestures; cues and development of left hand; fermata; etc. Study of scores; problems of interpretation and rehearsal; performance preparation. For Music majors or by permission.

**MUS. 366: CONDUCTING II 2 s.h.**

Continuation of Conducting I with emphasis on mastery of technique; special emphasis on problems of vocal groups in junior and senior high school.

**MUS. 367: ORCHESTRATION****2 s.h.**

Basic principles of clear instrumental organization and tonal interest, related to the size of the instrumental group. Ranges and registers of the instruments; transposition; bowing and phrasing; phrasing for woodwind instruments; possibilities and limitations. Texture, timbre, dynamics, principles of tonal interest: contrast of timbre; instrumental motion; blend. Structural values; design, overlapping of choirs; "light and shade." Orchestral types: Baroque, classic; modern; chamber. For Music majors or by permission.

**MUS. 368: BAND ARRANGING****3 s.h.**

A study of instrumentation and scoring problems in marching, military, and concert bands, symphonic wind ensembles, and woodwind and brass chamber ensembles. Emphasis on score layout and notation, copying and multiple reproduction of parts, copyright implications, and knowledge of effective combination of instrumental sounds. Prerequisites: Mus. 131 (or equivalent background) and consent of instructor.

**MUS. 369: MARCHING BAND TECHNIQUES  
AND MATERIALS****2 s.h.**

A detailed study of the marching band including organization, music, materials, care of instruments and uniforms, marching essentials, administration, and contemporary techniques. Prerequisites: Mus. 135, 136, 137, or permission of the instructor.

**MUS. 450: TEACHING THE CHANGING OR  
ADOLESCENT VOICE****3 s.h.**

This course will consist of the demonstration of techniques in the training, correcting, and building of adolescent voices. The course will be open to music teachers, college music majors, or by permission of the instructor. Summers only.

**MUS. 451: ADVANCED CONDUCTING****3 s.h.**

A study of selected works from band, choral, and orchestral literature with particular reference to performance problems involving tonal balance, tempi, complex, rhythmic and polymetric situations, vocal intonations, and diction. Conducting experience with band, choir and/or madrigal singers, and orchestra in rehearsal. Emphasis on a thorough understanding of the musical score and on effective rehearsal techniques. Prerequisites: Mus. 365, 366, or permission of instructor.

**MUS. 452: WESTERN MUSIC AND ITS RELATIONSHIP  
TO THE FINE ARTS****3 s.h.**

This course will consist of a comparative study of Western music in its stylistic relationship to the Fine Arts from the middle ages through the twentieth century. In addition it aims to show how the various arts responded to each other in the pattern of cultural history. No prerequisite courses are required, but a rudimentary background in music or art is desirable.

**MUS. 453: MELODIC IMPROVISATION****2 s.h.**

The course is designed to provide the advanced music student with fundamental concepts of improvisational techniques which may be applied

to the development of skills for the invention and performance of improvised melodies. Prerequisite: Mus. 135, 136, 235, 236, or equivalent theoretical background.

## ASSOCIATE DEGREE NURSING

### NURS. 101: FUNDAMENTALS OF NURSING 4 s.h.

An introduction to nursing in which the concepts of nursing and nursing relationships are employed. Emphasis is placed on the basic needs of the individual during health and how these needs may be altered by illness. The student begins to learn and use basic nursing techniques through the application of scientific principles. Planned learning experiences are provided in a clinical setting for the progressive development of practitioner skills. Two lecture and six laboratory or clinical experience hours weekly.

### NURS. 102: PARENTAL AND CHILD HEALTH NURSING 8 s.h.

The concept of the family as the basic unit of society is stressed in emphasizing nursing care during the normal maternal cycle and the growth and development of the child from birth through adolescence. Adaptations of nursing care to meet family needs arising from alterations in the normal health situation are also presented. Student-centered conferences are held preceding and following each laboratory period. Four lecture and twelve clinical experience hours weekly. Prerequisites: Biology 259; Psychology 211; minimum grade of C in Nursing 101.

### NURS. 201: NURSING IN HEALTH AND DISEASE I 8 s.h.

This course enables the student to increase his knowledge and understanding of the physiological, sociological, and psychological implications of illness. Opportunities are provided for the student to develop further and to apply those skills previously learned as well as to acquire new ones. Learning experiences are planned to enable the student to identify the patient's needs and to implement a plan of care in accordance with those needs. The primary focus is upon the commonalities and differences in the major health problems of today as they affect all age groups, and the possibilities to be encountered in the future. Four lecture and twelve clinical experience hours weekly. Prerequisites: Biology 259 and 260; Psychology 211 and 322; minimum grade of C in Nursing 101 and 102.

### NURS. 202: NURSING IN HEALTH AND DISEASE II 8 s.h.

Nursing 202 is a logical extension of Nursing 201, which is a prerequisite, offering additional opportunities for the student to develop technical skills and interpersonal relationships. Planned learning experiences during this course include observation and care of the mentally ill. Opportunity is also provided for the student to plan, implement, and evaluate total nursing needs for patients in intensive-care units and, utilizing a team approach, for groups of patients. Some emphasis is placed on the needs of long-term and rehabilitative patients. Four lecture and twelve clinical experience hours weekly. Prerequisites: Biology 259 and 260; Psychology 211, 322 and 311; minimum grade of C in Nursing 101, 102 and 201.

**NURS. 203: NURSING SEMINAR****3 s.h.**

Historical developments and trends in nursing are studied, as well as how nursing influences and is influenced by current needs and social practices. Discussion includes licensure and employment opportunities for the nurse. Students will also be concerned with problems and responsibilities as they refer to the nurse as a person, as a member of the health team, and as a member of the community. Prerequisites: minimum grade of C in Nursing 101, 102, and 201.

## **PUBLIC SCHOOL NURSING**

**NURS. 351: PUBLIC SCHOOL NURSING****3 s.h.**

An orientation to Pennsylvania's school health services is provided. The course demonstrates the nurse's responsibility in relation to the three main health obligations of the school: healthful school living, health instruction, and health services. Personal qualifications, professional preparation and functions of school nurse are outlined. Areas of study include health appraisal, health counseling, communicable disease control, emergency care, preventive procedures, and rehabilitation. Prerequisite: must have an R.N. degree.

**NURS. 352: SPECIAL HEALTH PROBLEMS OF  
SCHOOL AGED CHILDREN****3 s.h.**

This course covers a wide range of physical, social, and emotional problems common to school age children that prevent good school attendance or participation in the total school program. The nurse's responsibilities toward special community health concerns such as drug, tobacco, and alcohol consumption; unwed mothers; venereal disease; sex education; and juvenile delinquency are studied. Emotional health, hearing, and vision problems are stressed in class. Ways of adapting the school program to meet the needs of the handicapped are illustrated.

**NURS. 353: FAMILY CASEWORK****3 s.h.**

Counseling in the area of school and family inter-related health problems is focused on the family. Interviewing and counseling techniques are reviewed. Selected case materials demonstrate methods of motivating the family to initiate appropriate care by utilizing available resources and the relationship of family health to community improvement is considered.

**NURS. 354: PUBLIC HEALTH NURSING****3 s.h.**

This course includes a brief introduction to the organization, administration, and coordination of public health services and describes the process used by the public health nurse in delivering various specialized health services to her patient, the family. Emphasis is placed on current public health problems and the nurse's community responsibilities. Field trips to and guest speakers from official and non-official agencies are part of the course. Prerequisite: R.N. degree.

# PHILOSOPHY

PHIL. 111: ELEMENTARY LOGIC 3 s.h.

Principles of correct reasoning; principles of deductive and inductive inference and scientific method; use and misuse of language in reasoning.

PHIL. 112: SYMBOLIC LOGIC 3 s.h.

A study of the essential elements of symbolic logic including Boolean expansions, truth tables (symbolic proofs), the logic of relation, quantification rules, the properties of deductive systems, and propositional calculus. Special attention is given to the theoretical contributions of Carnap, Quine, and Russell.

PHIL. 211: INTRODUCTION TO PHILOSOPHY 3 s.h.

Inquiry into the persistent problems of philosophy, primarily those concerning man, nature and God. Prerequisite: sophomore standing.

PHIL. 212: ETHICS 3 s.h.

Examination of the problems of value and moral standards with a view toward developing an appreciation of the nature of the moral life.

PHIL. 255: HISTORY OF PHILOSOPHY I 3 s.h.

Thinkers from the Ancient Greeks up to the Renaissance, with special attention to Plato, Aristotle, Augustine, and Aquinas.

PHIL. 256: HISTORY OF PHILOSOPHY II 3 s.h.

Thinkers from the Renaissance to the 19th Century, with special attention to Descartes, Spinoza, Hume, Kant, and Hegel. Prerequisite: Philosophy 255 is recommended.

PHIL. 350: PHILOSOPHY OF RELIGION 3 s.h.

Inquiry into the nature and validity of religious knowledge; the nature and existence of God; the nature of man and human destiny.

PHIL. 352: EPISTEMOLOGY 3 s.h.

Concepts and problems involved in the appraisal of certain types of human knowledge: perception, knowledge and belief, and truth.

PHIL. 353: METAPHYSICS 3 s.h.

Inquiry into some of the fundamental philosophical concepts: being, substance, matter, mind, and God. Prerequisite: 6 credit hours in Philosophy.

PHIL. 354: AESTHETICS 3 s.h.

Study of some of the aesthetic theories from Plato to the present; nature of the aesthetic experience; principles of criticism in literature and the arts.

PHIL. 355: PHILOSOPHY OF SCIENCE 3 s.h.

Methods and procedures of reliable knowledge in the formal, natural, and social sciences. Prerequisite: Philosophy 111 is recommended.

PHIL. 356: ORIENTAL PHILOSOPHY 3 s.h.

Significant contributions to philosophical and religious thought in the Near East, India, China, and Japan.

- PHIL. 450: CONTEMPORARY PHILOSOPHY I 3 s.h.  
A study of European men and movements since 1850.
- PHIL. 451: CONTEMPORARY PHILOSOPHY II 3 s.h.  
A study of Anglo-American men and movements since 1900. Philosophy 450 is recommended.

## PHYSICS

- PHY. 112: BASIC PHYSICAL SCIENCE:  
PHYSICS AND ASTRONOMY 3 s.h.

This course is intended for those students not majoring in the sciences or mathematics, and does not presume any prior familiarity with the subject. Topics discussed are descriptive astronomy, cosmology, light and optics, force and motion, fundamental electrical phenomena and simple circuits, the special theory of relativity, and radioactivity and the atom. Brief experiments are integrated with the subject matter to emphasize the experimental basis of theory. The Planetarium is extensively used in conjunction with the sections on astronomy. No prerequisites. Also listed as PH. SCI. 112.

- PHY. 251: GENERAL PHYSICS I 4 s.h.

This is a general course in mechanics, heat, and sound. Topics studied include the mechanics of solids, liquids, gases, thermometry, calorimetry, heat transferences, and the production and nature of sound waves including musical sound. Designed for non-physics majors. Includes laboratory. Prerequisite: Math. 152 or Math. 171.

- PHY. 252: GENERAL PHYSICS II 4 s.h.

This is a continuation of Phy. 251, a general course in electricity, magnetism, light, and atomic physics. Topics discussed include general concepts of magnetism, electrostatics, electrical circuits, alternating currents, optical instruments, reflection, refraction, interference, spectra, and some basic concepts of atomic structure. Designed for non-physics majors. Includes laboratory. Prerequisite: Phy. 251.

- PHY. 258: INTRODUCTORY PHYSICS LECTURE I 4 s.h.

This is an introductory physics course designed for physics majors. The course includes mechanics, heat, and sound. Phy. 268 must be taken concurrently by physics majors.

- PHY. 268: INTRODUCTORY PHYSICS LABORATORY I 1 s.h.

This laboratory complements Phy. 258, and should not be scheduled by students who are not also enrolled in Phy. 258. Experiments performed in this laboratory include free-fall, momentum and energy, wave phenomena, heat and temperature. Also included is the technique of writing the formal scientific report.

- PHY. 259: INTRODUCTORY PHYSICS LECTURE II 4 s.h.

This is a continuation of Phy. 258, an introductory course in physics designed for Physics majors. This course includes electricity, magnetism,

light, and atomic physics. Phy. 269 must be scheduled concurrently with Phy. 259 by Physics majors. Prerequisite: Phy. 258.

**PHY. 269: INTRODUCTORY PHYSICS LABORATORY II 1 s.h.**

This laboratory complements Phy. 259, and should not be scheduled by students who are not also enrolled in Phy. 259. Experiments performed in this laboratory include current, potential, resistance and impedance measurements, use of the oscilloscope, image formation by lenses and mirrors, diffraction gratings, lasers, Geiger-Muller detectors, and the measurement of radioactive half-life.

**PHY. 351: MECHANICS 3 s.h.**

This is an intermediate course in the mechanics of solids, liquids and gases. Studies are made of rectilinear and curvilinear motion, work and energy, impulse and momentum, and oscillatory motion. Prerequisites: Phy. 252 or 259; Math. 350. Physics majors must concurrently enroll in Phy. 361.

**PHY. 361: MECHANICS LABORATORY 1 s.h.**

This laboratory complements Phy. 351, and no student should enroll in this course who is not also enrolled in Phy. 351. Experiments are performed with pendulums of various types and the large linear air track, and moments of inertia, coefficient of viscosity, and the universal gravitational constant are among the physical constants evaluated. The properties of common differential equations of motion are examined with the aid of an analog computer, together with the effects of varying different constants of the equations.

**PHY. 352: ELECTRICITY AND MAGNETISM 3 s.h.**

An immediate course in electricity and magnetism. Vector analysis techniques are used for studying various areas of electrostatics and considerable emphasis is placed on A.C. circuit theory. Maxwell's equations for the electromagnetic field are derived. Prerequisites: Phy. 252 or 259; Math. 350. Physics majors must concurrently enroll in Phy. 362.

**PHY. 362: ELECTRICAL MEASUREMENTS LABORATORY 1 s.h.**

This laboratory complements Phy. 352, and no student should enroll in this course who is not also enrolled in Phy. 352. Precision electrical instruments are utilized to make such measurements as temperature coefficient of resistance, thermoelectric potentials, magnetic flux intensity, Hall effect, etc.

**PHY. 353: ATOMIC PHYSICS 3 s.h.**

An intermediate course on the electronic structure of the atom, including Bohr theory, Quantum Theory, and Vector Model. Optical and X-ray spectra, the Special Theory of Relativity, and the Uncertainty Principle are among the topics studied. Prerequisites: Phy. 252 or 259; Math. 172, with Math 271 concurrently. Physics majors must concurrently enroll in Phy. 363.

**PHY. 363: ATOMIC LABORATORY 1 s.h.**

This laboratory complements Phy. 353, and no student should enroll in this course who is not also enrolled in Phy. 353. Experiments include the

Millikan Oil Drop experiment for determining electronic charge, ratio of charge to mass of the electron, the Franck-Hertz experiment, electron diffraction, Bragg reflection, Zeeman effect, and the Stern-Gerlach experiment.

**PHY. 354: OPTICS** 3 s.h.

This is an intermediate course in geometrical and physical optics. Topics include thin lenses, thick lenses, interference, diffraction, polarization, color theory, and the study of spectra. Prerequisites: Phy. 252 or 259; Math. 271, with Math. 272 concurrently. Physics majors must simultaneously enroll in Phy. 364.

**PHY. 364: OPTICAL LABORATORY** 1 s.h.

This laboratory complements Phy. 354, and should not be scheduled by students who are not also enrolled in Phy. 354. The experiments include velocity of light measurements, spectra and spectrometers, use of the laser in mirror and lens aberrations and properties, interferometer studies, etc.

**PHY. 355: NUCLEAR PHYSICS** 4 s.h.

An introduction to the experimental and theoretical study of the atomic nucleus. Topics include natural and artificial radioactivity, decay schemes, nuclear reactions, nuclear energy levels, nuclear models, and instrumentation. Prerequisites: Phy. 353; Math. 272.

**PHY. 356: HEAT** 3 s.h.

This is an intermediate course in heat. The basic concepts and principles are developed more intensively in the study of properties of gases and in thermodynamics. Some of the specific topics studied are temperature measurements, thermal expansion, specific heat, thermal conductivity of solids and liquids, thermal properties of gases, change in phase, and heat engines. Prerequisite: Phy. 252 or 259; Math. 272.

**PHY. 357: INTRODUCTION TO THE THEORY  
OF THE SOLID STATE** 3 s.h.

The course will include the study of two- and three-dimensional space groups, Miller indices, crystalline structure of various types, X-ray diffraction, lattice vibrations, Einstein and Debye theories of heat capacity of solids, the free electron model transport properties of the electron gas, heat capacity of conduction electrons. Fermi-Dirac distribution law, and the transport properties of metal. Prerequisite: Phy. 353.

**PHY. 453: INDEPENDENT STUDY IN  
PHYSICAL MEASUREMENTS** 2 to 6 s.h.

This is a course in the theory and use of precision measuring devices covering most of the areas of Physics. Experiments are devised to fit the background and needs of the individual student, exploiting the equipment from all of the various special laboratories of the Physics Department. The student will work from three to six hours each week on experimental projects, according to the credit he elects upon consultation with his advisor.

**PHY. 455: ELECTRONICS** 3 s.h.

This course includes the analysis of circuits containing passive devices: resistors, capacitors, and inductors; as well as study of active devices:



vacuum tubes and transistors. The uses of these devices in communications and industry are studied. Prerequisites: Phy. 252 or 259.

**PHY. 457: DEMONSTRATION IN PHYSICS** 3 s.h.

This course is designed for the secondary education major in physics. Preparation and performance of classroom demonstrations for use in secondary schools are stressed. Prerequisites: Phy. 252 or 259.

**PHY. 460: INTRODUCTION TO MATHEMATICAL PHYSICS** 3 s.h.

This course uses the techniques of vector calculus and differential equations with occasional introduction of topics of complex variables, calculus of variations and Fourier Series to treat problems of mechanics, electricity, and other areas of physics at a level intended to prepare the physics major for graduate-level work. Prerequisites: Phy. 351, 352, 353, 354, or which two may be taken concurrently with Phy. 460; Math. 272, 350; senior standing.

**PHY. 461: SEMINAR** 1 s.h.

The physics seminar consists of mastering the techniques of literature-survey and library research on specific topics, together with the preparation and presentation of formal reports of a research nature. Prerequisites: senior standing, science major.

## **POLITICAL SCIENCE**

**P.S. 210: INTRODUCTION TO POLITICAL SCIENCE** 3 s.h.

The underlying assumptions, varying methods, and differing conclusions of normative and empirical political analysis compared and contrasted by analyzing examples of both approaches.

**P.S. 211: AMERICAN GOVERNMENT** 3 s.h.

The study of the general principles of the American system of constitutional government; special emphasis is placed upon the organization and functions of the national government — legislative, executive, and judicial. The rights and duties of citizenship, the electorate, political parties, civil rights, and the growing regulatory function of government are carefully treated.

**P.S. 351: STATE AND LOCAL GOVERNMENT** 3 s.h.

This course deals mainly with a detailed study of how our state and local governments function. Emphasis is placed on Pennsylvania government and the study is implemented by a field trip to Harrisburg for a more complete observation of state government at work. Field trips are made to local borough council and neighboring council meetings when available. A detailed study of the Constitution of Pennsylvania is made with emphasis on current amendments and changes. Independent study through outside projects is one of the requirements of this course.

**P.S. 352: INTERNATIONAL POLITICS** 3 s.h.

This course presents a framework for analyzing the behavior of states, the basic factors which motivate and affect international policies, and the techniques of resolving international conflicts.

## P.S. 353: INTERNATIONAL ORGANIZATION 3 s.h.

This course deals with international organizations, both historically and analytically. Emphasis is placed on configurations that induce state behaviors leading to resolution of international conflicts and to the solution of common problems.

P.S. 354: CONSTITUTIONAL LAW OF THE UNITED STATES 3 s.h.

A study of the development of the Constitution through the interpretations of the Supreme Court. This includes a study of the separation of governmental powers, political and judicial processes, federalism as a legal device, and the relationship of liberty and authority to the individual living under government. Prerequisite: P.S. 211.

## P.S. 355: POLITICAL PARTIES AND ELECTIONS 3 s.h.

A survey course with emphasis on the study of the electorate, pressure groups, and public opinion, nature and history of political parties, party organization, methods of nominations, and elections. Special attention is given to the place of political parties and elections as instruments of democracy and their place in the framework of Pennsylvania's government.

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| P.S. 365: | ANCIENT AND MEDIEVAL<br>POLITICAL THOUGHT | 3 s.h. |
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## The development of political theory from Plato to Machiavelli.

## P.S. 366: MODERN POLITICAL THOUGHT 3 s.h.

The development of political theory from Renaissance humanism to twentieth-century totalitarianism.

## P.S. 375: PUBLIC ADMINISTRATION 3 s.h.

An introduction to the study of public administration with emphasis on its function in the American political process.

## P.S. 451: COMPARATIVE GOVERNMENT 3 s.h.

A consideration of the problem inherent in comparing political systems with emphasis on the British, French, and Soviet political systems.

P.S. 452: GOVERNMENT AND POLITICS OF SOUTHEAST ASIA 3 s.h.

The constitutional development and the process of political modernization in Thailand, Burma, Indonesia, Malaysia, Vietnam (North and South), Cambodia, and the Philippines.

## P.S. 458: ENGLISH CONSTITUTIONAL HISTORY 3 s.h.

A consideration of constitutional government in England from the beginning of English history to the present. The study of governmental powers, political and judicial processes, and the relationships of liberty and authority to the individual living under the government is included.

# PSYCHOLOGY

## PSY. 211: GENERAL PSYCHOLOGY 3 s.h.

Study is made of the general subject matter of psychology, its methods and procedures and its major findings. Areas of particular stress include genetic inheritance, development, learning, emotions and motivation, sensation and perception, and social aspects of behavior.

NOTE: Psychology 211 is a prerequisite for all of the following courses:

## PSY. 222: EDUCATIONAL PSYCHOLOGY 3 s.h.

A study of the psychological foundations of education and the application of principles and methods of psychology to problems of learning and teaching.

NOTE: Credit toward the psychology major or minor will not be granted for this course.

## PSY. 225: PSYCHOLOGY OF ADJUSTMENT 3 s.h.

This course emphasizes the psychodynamics of "normal" social adjustment and enables each student to explore his own self-identity, his social relationships, and his interactions with his environment. Problems of personality, mechanisms of adjustment, the origin and resolution of conflicts, and the role of emotion in behavior are studied.

## PSY. 230: INTRODUCTORY STATISTICS FOR THE BEHAVIORAL SCIENCES 3 s.h.

An introduction to descriptive and inferential statistical methods and theory as applied to data from the behavioral sciences. Lecture and laboratory work.

## PSY. 251: EXPERIMENTAL PSYCHOLOGY 3 s.h.

This course aims to acquaint the student with psychological experimentation and its methodology, particularly in the area of psychophysics. Subjects of experimentation include sensation, perception, illusions, learning, etc. Particular attention is given to the appropriate style of writing research reports. Psy. 230 is a prerequisite for Psychology majors; concurrent registration is permitted with consent of instructor.

## PSY. 260: DEVELOPMENTAL PSYCHOLOGY 3 s.h.

Study of the development of human behavior from conception through infancy, childhood, adolescence, adulthood, and old age. Special attention is given the physical, emotional, intellectual, and social aspects of development.

## PSY. 321: PSYCHOLOGY OF ADOLESCENCE 3 s.h.

The physical, intellectual, psychosocial, and cultural bases of adolescent behavior are studied as these relate to peers, home, school, and community.

## PSY. 331: CHILD PSYCHOLOGY 3 s.h.

Study of the child from birth through pre-adolescence. Topics include the physical, social, emotional, and intellectual development of children, the relationship of heredity to environment, personality development, attitudes toward self and others.

**PSY. 332: PSYCHOLOGY OF EXCEPTIONAL CHILDREN AND YOUTH** 3 s.h.

This course introduces the student to the nature and characteristics of the blind, the deaf, the crippled, speech defectives, the mentally handicapped, the gifted, and the socially maladjusted. It aims to promote a functional understanding of the psychological implications of their behavior and its treatment as well as the guiding principles necessary to aid them in their learning processes.

**PSY. 350: INDUSTRIAL PSYCHOLOGY** 3 s.h.

This course is concerned with personality factors and individual differences in relation to success in business and industry. The psychological principles involved in advertising, selling, personnel selection and management, mental and physical efficiency, intelligence, motivation, fatigue, and the environmental setting are among those analyzed. Prerequisite: Statistics — Psy. 230, Econ. 220, or Math 221.

**PSY. 354: ABNORMAL PSYCHOLOGY** 3 s.h.

A survey is made in this course of the principal forms of the behavior disorders with emphasis on their etiology, diagnosis, prognosis, and treatment.

**PSY. 355: SOCIAL PSYCHOLOGY** 3 s.h.

Study is made in this course of the interpersonal relations of man and how these are affected by society's norms and values.

**PSY. 356: SYSTEMATIC PSYCHOLOGY** 3 s.h.

In this course the major theoretical systems of modern psychology are examined and critically evaluated.

**PSY. 360: CURRENT TOPICS** 3 s.h.

This course focuses on a single, broad, contemporary issue of current interest in psychology and related fields of study. Course content varies from semester to semester. May be taken three times for credit.

**PSY. 393: INDEPENDENT STUDY** 1-3 s.h.

An opportunity for the student to explore an area of special interest in depth for variable credit under the supervision of a member of the department and with approval of the chairman. Open to juniors and seniors.

**PSY. 452: PHYSIOLOGICAL PSYCHOLOGY** 3 s.h.

Examination is made in this course of the basic physiological mechanisms underlying behavior with special emphasis upon the functions of the nervous and endocrine systems as these relate to sensation, perception, emotion, and learning.

**PSY. 454: PERSONALITY** 3 s.h.

Systematic study is made of the development, dynamics, and structure of the self-system together with a critical comparison of the major theories of personality.

**PSY. 455: LEARNING AND MOTIVATION** 3 s.h.

A critical survey is made of the outstanding attempts to understand and

explain the nature of the learning process. Emphasis is placed on a comparison of current theories and their implications when applied to forms of learning and motivation from the simple to the complex.

**PSY. 456: INTRODUCTION TO PSYCHOLOGICAL TESTING 3 s.h.**

The major intelligence, aptitude, interest, and personality tests and inventories are critically examined and evaluated. Emphasized are the current psychometric theories underlying their construction and use and the interpretation of results.

**PSY. 458: SENSATION AND PERCEPTION 3 s.h.**

The sensory-perceptual processes will be studied with a view to understanding their structural properties and their role in the psychological functioning of man. Particular emphasis will be placed on vision and hearing and the differences within and between human individuals.

**PSY. 459: COMPARATIVE PSYCHOLOGY 3 s.h.**

A study of the underlying genetic and biological controlling mechanisms of animal and human behavior. Special emphasis given to role of evolution and natural selection in the development of behavioral adaptations, and to behavioral comparisons between species.

**PSY. 464: INTRODUCTION TO CLINICAL PSYCHOLOGY 3 s.h.**

Basic methods and techniques in clinical psychology are critically examined and evaluated. Prerequisites: Psy. 354 and 456.

Psy. 211, General Psychology, is a prerequisite for all other Psychology courses.

## **RUSSIAN**

**Note:** Clarion does not offer a major in Russian or teaching certification in Russian and does not accept students seeking either.

**RUSS. 151: RUSSIAN (ELEMENTARY I) 4 s.h.**

Essentials of grammar with emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Fall semester.

**RUSS. 152: RUSSIAN II (ELEMENTARY II) 4 s.h.**

Continuation of Russian 151, with increasing emphasis on graded reading material. Prerequisite: Russian 151 or consent of the instructor. Spring semester.

**RUSS. 251: RUSSIAN III (INTERMEDIATE I) 3 s.h.**

Systematic review of basic grammar; graded readings; conversation; translation; and composition on selected topics. Prerequisite: Russian 152 or two years of high school study and/or satisfactory placement test score. Fall semester.

**RUSS. 252: RUSSIAN IV (INTERMEDIATE II) 3 s.h.**

Intensive reading of selected works; outside reading, with oral and/or written reports. Prerequisite: Russian 251 or three years of high school study and/or a satisfactory placement test score. Spring semester.

RUSS. 253: SCIENTIFIC RUSSIAN 2 s.h.

A study of scientific terminology and style, with extensive readings in various scientific fields. Prerequisite: Russian 251 or equivalent. Science and mathematics majors may substitute this course for Russian 252. Spring semester.

RUSS. 255: RUSSIAN CIVILIZATION I 3 s.h.

A survey of the geography, history, literature, and culture of the Soviet Union designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful, and integral part of a great civilization. Prerequisite: Russian 252 or four years of high school study and/or a satisfactory placement test score. Fall semester.

RUSS. 256: RUSSIAN CIVILIZATION II 3 s.h.

Continuation of Russian 255, which is prerequisite. Spring semester.

RUSS. 300: RUSSIAN LITERATURE IN TRANSLATION 3 s.h.

Synoptic studies of major works by Russian writers of the 19th or 20th century with particular emphasis on philosophical ideas, literary methods, and characters which have had a considerable influence upon Russian and other literatures. The course concentrates on comparative studies, with class discussion, reading, and lectures. No prerequisites: Conducted in English.

RUSS. 351: ADVANCED GRAMMAR AND COMPOSITION 3 s.h.

Intensive oral and written drill, with emphasis on finer points of grammar, and colloquial and idiomatic usage. English-to-Russian translation, free composition, and conversation on everyday topics.

RUSS. 353: THE RUSSIAN DRAMA 3 s.h.

Dramatic works of the 19th and 20th centuries, with special emphasis on the works of Anton Chekhov.

RUSS. 354: THE RUSSIAN NOVEL 3 s.h.

The great Russian novelists of the 19th Century: Gogol, Turgenev, Dostoevsky, and Tolstoy.

RUSS. 355: READINGS IN SOVIET RUSSIAN LITERATURE 3 s.h.

A survey of Russian literature since the Revolution of 1917.

RUSS. 361: DOSTOEVSKY 3 s.h.

A study of the life and works of Dostoevsky, with emphasis on his great novels: *Crime and Punishment*, *The Idiot*, *The Possessed*, and *The Brothers Karamazov*.

RUSS. 451: SUPERVISED READINGS IN RUSSIAN 3 s.h.

This course is devoted to selected readings determined in relation to the needs and interests of individual students.

Note: Clarion does not offer a major in Russian or teaching certification in Russian and does not accept students seeking either.

## **SAFETY EDUCATION**

**SE 211: GENERAL SAFETY EDUCATION 3 s.h.**

The development of habits and attitudes that are conducive to safe living by both teachers and students. Acquaintance with 1. rules, regulations, and laws concerning the operation of motor vehicles; 2. rules and regulations of pedestrian travel; 3. other hazards to which we are commonly subjected, such as fire, electricity, etc., especially in the home and school.

**SE 212: ORGANIZATION AND ADMINISTRATION  
OF SAFETY EDUCATION 3 s.h.**

A consideration of procedures and problems related to the organization and administration of safety education in the public school.

**SE 213: METHODS AND MATERIALS FOR TEACHING  
SAFETY IN THE SECONDARY SCHOOLS 3 s.h.**

The study of evaluative techniques, content, methods, and teaching aids in the program of safety education in the secondary schools.

**SE 214: PSYCHOLOGY OF ACCIDENT PREVENTION 3 s.h.**

Relates the achievement of behavior consistent with safe living to the psychological factors and techniques essential in the learning process. A review of the literature and experimentation relative to proneness to accidents, effect of alcohol on drivers, reaction times, etc.

**SE 215: VISUAL AND OTHER AIDS IN  
SAFETY EDUCATION 3 s.h.**

Evaluation and use of posters, charts, radio, projectors, and special aids in the teaching of safety education.

**SE 351: DRIVER EDUCATION AND TRAFFIC SAFETY 3 s.h.**

Classroom instruction combined with road training and the teaching of driving to beginners using dual control cars. Emphasis is placed upon the essential facts, principles, skills, and attitudes necessary for good driving and the teaching of same to beginning drivers. Ability to use and interpret the results of psycho-physical testing is required.

## **SCIENCE AND SCIENCE EDUCATION**

**PH. SCI. 111: BASIC PHYSICAL SCIENCE: CHEMISTRY 3 s.h.**

This course is intended for non-science majors and does not assume prior familiarity with chemistry. It does not count toward requirements for science majors, but can be applied to fulfill the general education math-science requirements for non-science majors.

Selected chemical principles are explored with the purpose of providing a background that will enable the student as a citizen to understand issues involving the interaction of science and society; brief experiments are often included. Students who prefer a more traditional chemistry course may elect either Chemistry 153 or 151 to fulfill their general educational requirements. No prerequisites. (Also listed as Chem. 111.) Fall and Spring.

PH. SCI. 112: BASIC PHYSICAL SCIENCE:  
PHYSICS AND ASTRONOMY

3 s.h.

This course is intended for those students not majoring in the sciences or mathematics, and does not presume any prior familiarity with the subject. Topics discussed are descriptive astronomy, cosmology, light and optics, force and motion, fundamental electrical phenomena and simple circuits, the special theory of relativity, and radioactivity and the atom. Brief experiments are integrated with the subject matter to emphasize the experimental basis of theory. The Planetarium is extensively used in conjunction with the sections on astronomy. No prerequisites. (Also listed as Phy. 112.)

PH. SCI. 211: SOUND, MUSIC AND ACOUSTICS

3 s.h.

This course is primarily designed for the student majoring in Music or in a discipline in which the Physics of Sound is of considerable importance. Topics include the basic physics of wave motion, superposition of waves, transverse and longitudinal waves, diffusion, diffraction and reflection, intensity, quality, and harmonic analysis of sound waves, reverberation and absorption, sound production by musical instruments and the voice, noise and harmony, factors in hearing, and the electronic recording and reproduction of sound.

Prerequisite: The student must be in a music major program or have the permission of the instructor.

PH. SCI. 457: INTRODUCTION TO ELECTRONICS  
FOR AUDIO APPLICATIONS

3 s.h.

A survey of basic electricity and the physics of sound, with fundamental electronics. The course is intended to give the student an understanding of basic electronics used in audio applications, especially testing and trouble-shooting equipment. It is primarily intended for students in speech pathology and audiology, as an elective for both undergraduate and graduate students.

SCI. ED. 322: TEACHING OF ELEMENTARY SCIENCE

3 s.h.

Methods of presenting science in the elementary school. Experiences are provided in learning process, scope and sequence of science concepts, methods of investigation, problem solving, laboratory skills, scientific attitudes, newer curricula, reading materials, observing and working with elementary school children, developing, teaching and evaluating lessons. 2 hours lecture and 2 hours laboratory weekly.

SCI. ED. 331: BIOLOGICAL INVESTIGATIONS IN  
SCIENCE EDUCATION

3 s.h.

This course, following the year of basic sciences, is designed to provide the prospective elementary teacher with a more adequate background in biology and laboratory experiences applicable to teaching in the elementary school. The course has three aspects: (1) identification and natural history of local flora and fauna, (2) principles of basic ecology, and (3) methods of teaching the above areas of knowledge in a manner which will foster critical thinking.



**SCI. ED. 456: ELECTRONICS FOR THE HIGH SCHOOL  
SCIENCE TEACHER**

4 s.h.

The course is intended for the science teacher who has had little or no previous course work in physics or mathematics. The subjects covered include the fundamental laws of electricity and magnetism, alternating current theory, and the theory and practical application of such devices as ammeters, voltmeters, oscilloscopes, vacuum tubes, transistors, power suppliers, amplifiers, and oscillators. Examples of some of these devices will be built in the laboratory, and general procedures for trouble-shooting faulty equipment will be illustrated.

**SCI. ED. 463: ASTRONOMY: OBSERVATION  
AND FIELD STUDIES**

3 s.h.

This is a course in the experimental tools and methods useful in astronomy. It is not an encyclopaedic survey of astronomy, but concentrates on mastery of important techniques and concepts by a "do-it-yourself" process. It complements courses in descriptive astronomy (E.S. 353 and Sci. Ed. 550) rather than duplicating them, serving much the same purpose as a laboratory in astronomy. The student will build simple telescopes, spectroscopes, and other astronomical instruments.

**SCI. ED. 485: PLANETARIUM OPERATION  
AND MANAGEMENT**

3 s.h.

An introduction to the techniques of operation and maintenance of planetarium projectors. Opportunities are provided for writing and presenting programs at various levels of instruction. The use of auxiliary projectors, the production of audio-visual materials, multi-media displays, and live versus programmed presentations are emphasized. Prerequisite: E.S. 353 or consent of instructor.

## **SOCIOLOGY AND SOCIAL WORK**

**SOC. 211: PRINCIPLES OF SOCIOLOGY**

3 s.h.

This is the basic course in sociology dealing with the interaction arising from the association of human beings. Emphasis is placed upon natural and social heritage; the meaning and functions of culture; and the origin, function, and characteristics of social institutions such as the family, religion, and the state, with inquiry into the nature and genesis of pathology.

**SOC. 321: SOCIOLOGY OF WORK**

3 s.h.

A study of occupational and organizational work settings, meaning of work, work and society. The final weeks emphasize selected work settings. Prerequisite: Sociology 211 or Anthropology 211.

**SOC. 351: CONTEMPORARY SOCIAL PROBLEMS**

3 s.h.

This course deals with problems which seem to interfere with the proper functioning of our society as a whole. Such topics as community control, a garrison society, "the sick cities," and mass culture, as well as selected aspects of economic concern involving a family wage and welfare,

are discussed. The course also focuses on the theories and explanations of social change.

**SOC. 352: THE FAMILY 3 s.h.**

This course deals with the development of the family and the home in its historical, economic, and legal aspects. The various factors influencing the organization, disorganization, and reorganization of the family are considered, as well as the modern trends in this basic institution.

**SOC. 361: SOCIOLOGY OF DEVIANT BEHAVIOR 3 s.h.**

The course examines deviance as a constant general social phenomenon, as well as forms of behavior which may be classified as deviant, especially in terms of American society. These will include crime and delinquency, drug usage and addiction, and sexual behavior. Emphasis will be given not only to the nature and forms of deviance, but also to reactions and orientations to deviance on the part of the deviant and of the larger society.

**SOC. 362: RACIAL AND ETHNIC MINORITY PROBLEMS 3 s.h.**

Background of racial and ethnic minority group relations in different ages and societies. Theories and scientific inquiries by sociologists, anthropologists, and psychologists related to racial and ethnic groups. Contemporary aspects of inter-ethnic and inter-racial group problems. Proposals for alleviating and resolving problems and their implications for major social institutions such as education, the economy, and government. Prerequisite: Psy. 211.

**SOC. 363: URBAN SOCIOLOGY 3 s.h.**

Study of urban communities, their composition, structure, and development in relation to other types of communities. The growth of mass urban society, population shifts and trends, and their implications for basic social institutions such as education, the family, and the economy. Special emphasis upon contemporary urban problems and proposals of urban planners and community developers to meet them. Prerequisite: Soc. 211.

**SOC. 370: FUNDAMENTALS OF POPULATION STUDY 3 s.h.**

A study of factors influencing the quality and quantity, distribution, growth, and movement of populations. An examination of population trends and the implication for social problems and social policy.

**SOCIAL WORK 311: PRINCIPLES OF SOCIAL WORK 3 s.h.**

An overview of social work focusing on the historical development, major fields of practice and their application to social welfare issues and institutions. Prerequisites: Sociology 211 and either Sociology 351 or 363 or consent of the instructor.

**SOCIAL WORK 312: SOCIAL WORK WITH GROUPS 3 s.h.**

A study of the practice of groupwork, one of the core methods of social work, with emphasis on strategies used in various social work settings.

# SPANISH

In addition to the courses listed below, students of Spanish have an opportunity to study for a summer, a term, or an entire academic year in Spain and/or Mexico.

**SPAN. 151: SPANISH I (ELEMENTARY I)** 4 s.h.

Essentials of grammar with emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Fall semester.

**SPAN. 152: SPANISH II (ELEMENTARY II)** 4 s.h.

Continuation of Spanish 151, with increasing emphasis on graded reading material. Prerequisites: Spanish 151 or consent of the instructor. Spring semester.

**SPAN. 153: ELEMENTARY SPANISH CONVERSATION** 3 s.h.

Conversational practice, with extensive oral drill of grammatical patterns. Designed for those students who have met the prerequisites for Spanish 251 but are lacking in aural-oral proficiency. May be taken concurrently with Spanish 251.

**SPAN. 251: SPANISH III (INTERMEDIATE I)** 3 s.h.

Systematic review of basic grammar; graded readings, conversation, translation, and composition on selected topics. Prerequisite: Spanish 152 or two years of high school study and/or a satisfactory placement test score. Fall semester.

**SPAN. 252: SPANISH IV (INTERMEDIATE I)** 3 s.h.

Intensive reading of selected works; outside reading, with oral and/or written reports. Prerequisite: Spanish 251 or three years of high school study and/or a satisfactory placement test score. Spring semester.

**SPAN. 253: COMMERCIAL SPANISH** 2 s.h.

A study of commercial terminology and style, with extensive practice in the writing of business letters of various kinds. Prerequisite: Spanish 251 or equivalent. Economics and business administration majors may substitute this course for Spanish 252. Spring semester.

**SPAN. 255: HISPANIC CIVILIZATION I** 3 s.h.

A survey of Hispanic geography, history, literature, and culture designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful and integral part of a great civilization. Prerequisite: Spanish 252 or four years of high school study and/or a satisfactory placement test score. Fall semester. Required of Spanish majors.

**SPAN. 256: HISPANIC CIVILIZATION II** 3 s.h.

Continuation of Spanish 255, which is, however, not prerequisite. Spring semester.

**SPAN. 300: SPANISH LITERATURE IN TRANSLATION** 3 s.h.

A study of representative Spanish literary works, with particular emphasis on the characters and ideas which have influenced both Spanish



# SPECIAL EDUCATION

## SP.ED. 210: EXCEPTIONAL CHILDREN 3 s.h.

The course is a study of the causes, characteristics, and implications — educational, social, and vocational — of children who are exceptional because of intelligence, physical development, behavior, vision, hearing, and speech. It also acquaints prospective professional personnel with vocational opportunities in Special Education and Rehabilitation.

## SP.ED. 215: OBSERVATION AND PARTICIPATION 3 s.h.

Participatory half-day weekly experiences are provided for orientation to Special Education programs augmented by a 2-hour weekly session of human relations skills training.

## SP.ED. 220: NATURE OF MENTAL RETARDATION 3 s.h.

This is a comprehensive study of the biological, psychosocial, and educational implications of retarded mental development, including a consideration of etiology; assessment and diagnosis; educational programs, including pre-school and post-school; adult social and vocational adjustment; national and local programs; and research. Prerequisite: Sp.Ed. 210.

## SP.ED. 240: THE PHYSICALLY HANDICAPPED 3 s.h.

The course presents the major physical anomalies, the reaction of family and individual to the handicap, therapeutic procedures, rehabilitation services, and direct contacts with persons in programs for the handicapped. Prerequisite: Sp.Ed. 210.

## SP.ED. 405: LEARNING AND BEHAVIORAL DISORDERS 3 s.h.

The nature of central nervous system anomalies and aberrant patterns of emotional development are observed and analyzed with concern for their diagnostic, educational, and rehabilitation implications. Prerequisite: Sp.Ed. 220.

## SP.ED. 410: EDUCATIONAL APPRAISAL AND PRESCRIPTION I 3 s.h.

This experience is conducted in the psychoeducational clinic of the Special Education Center and involves observation and active participation in educational diagnostic/prescriptive processes with persons who have learning problems. Prerequisite: Sp.Ed. 405.

## SP.ED. 415: INSTRUCTIONAL DEVELOPMENT AND STRATEGIES I 6 s.h.

This is the study of the process of individualizing instruction for children with mild to moderate learning handicaps. It involves designing basic instructional sequences utilizing behavioral objectives, matching media with learner and goal-characteristics, identifying appropriate instructional strategies, and evaluating the effectiveness of instruction. Prerequisite: Sp.Ed. 220.

## SP.ED. 420: INSTRUCTIONAL DEVELOPMENT AND STRATEGIES II 6 s.h.

This is a study of the process of individualizing instruction for children with severe to profound learning handicaps. It involves designing basic

instructional sequences utilizing behavioral objectives, matching media with learner and goal-characteristics, identifying appropriate instructional strategies, and evaluating the effectiveness of instruction. Prerequisite: Sp.Ed. 220.

**SP.ED. 425: CURRICULUM MATERIALS FOR  
EXCEPTIONAL CHILDREN** 1-3 s.h.

This course considers contemporary curricular innovations in educational programs for exceptional children and youth, with particular attention to the sociocultural implications of changing curricular practices and the new instructional media and technology.

**SP.ED. 430: TEACHING/LEARNING STRATEGIES** 1 s.h.

This course is designed to expand the understanding of the teaching-learning process by observation and application, focusing upon the development of advanced skills in the analysis of teacher behaviors, learner behaviors, and classroom interactions and their implications. Prerequisite: Sp.Ed. 415.

**SP.ED. 450: STUDENT TEACHING** 12 s.h.

Observation and participation in teaching children with retarded mental development and in activities related to the performance of a teacher's work.

**SP.ED. 460: HABILITATION RESOURCES AND PROCESSES  
FOR EXCEPTIONAL INDIVIDUALS** 3 s.h.

This is a study of programs and populations in institutions and communities which offer services to exceptional individuals to increase participation in personal, social, and vocational activities. Prerequisite: Sp.Ed. 220.

**SP.ED. 495: FIELD EXPERIENCE AND PRACTICUM  
IN HABILITATION SERVICES** 15 s.h.

This course consists of a full semester of 2 nine-week field experiences and a weekly practicum-seminar. Each field experience will be in an appropriate institutional or community setting concerned with the management or delivery of services to handicapped persons. The seminar will deal with technical and legal problems in the delivery of life-management services. Prerequisites: Minimum of 80 s.h. and Sp.Ed. 240, 420, and 460.

## **SPEECH COMMUNICATION AND THEATER**

**SCT 113: FUNDAMENTALS OF SPEECH** — each semester 3 s.h.

Study, application, and evaluation of principles of organization, evidence, reasoning, critical thinking, verbal and nonverbal behavior, one-way and two-way communication, and small group interaction in the oral communication setting; emphasis upon meeting the individual needs of students through individualized instruction utilizing communication experiences.

- SCT 114:      ADVANCED PUBLIC SPEAKING —**  
                     1st semester, annually 2 s.h.  
 Inquiry into and practice in the principles of effective public speaking. Detailed analysis of the areas of invention, arrangement, style, and delivery, and an introduction to speech criticism as a tool to improve the speaker's own abilities. Prerequisite: consent of instructor.
- SCT 115:      PARLIAMENTARY PROCEDURE —**  
                     1st semester, annually 1 s.h.  
 A study of the principles and applications of the standard parliamentary rules used in conducting formal meetings of social, civic, and political bodies.
- SCT 120:      THEATER PLAY PRODUCTION —**  
                     1st semester, annually 3 s.h.  
 Elementary work in elements of theater, including directing, acting, make-up, criticism, stagecraft, and stagelight. No prerequisites. Students may not take both SCT 120 and SCT 350 for credit.
- SCT 200:      COMMUNICATION THEORY AND**  
                     **PROCESSES —** 1st semester, annually 3 s.h.  
 This course for prospective teachers of communication in secondary schools provides a survey of the nature and function of the communication process and an introduction to various communicative arts.
- SCT 225:      THE RHETORIC OF CONFRONTATION —**  
                     2nd semester, even numbered years 3 s.h.  
 This course is designed to introduce the student to the development of the rhetoric of confrontation and its contemporary manifestations in this country. The course emphasizes those antecedent conditions giving rise to confrontational discourse, the historical development of confrontation rhetoric, and provides analysis of case studies of contemporary efforts to modify existing social, political, and economic systems through confrontation.
- SCT 251:      VOICE AND DICTION — each semester** 3 s.h.  
 The objective of this course is to help students improve their speech by the elimination of faulty voice and articulation habits. Attention is given to such basic skills as volume, pitch, resonance, rate, phrasing, pronunciation and articulation. Tape recordings are used as a helpful device for analyzing problems and noting progress.
- SCT 252:      SPEECH COMMUNICATION IN THE**  
                     **ELEMENTARY CLASSROOM —**  
                     1st semester, annually 3 s.h.  
 A survey course designed to acquaint the prospective teacher with speech concepts and activities. Subjects covered in the area of speech science are: speech anatomy, phonetics, language acquisition, and normal and abnormal speech problems. The areas included in the creative or expressive arts are: choral reading, oral interpretation, story telling, puppetry, creative dramatics, theater for children, speaking and listening, and discussion.

The subjects are considered not as an end in themselves but as an aid in teaching various related areas. Through the different activities the prospective teacher is made aware of his own strengths and weaknesses in the field of communication. The students are given an opportunity to teach their peer group during the semester and an opportunity is provided whereby they present various speech and theater activities to their class.

SCT 253: INTRODUCTION TO THE THEATER —  
each semester 3 s.h.

Survey of plays, theatre practice, and production from Aeschylus to Miller. Theory and criticism.

SCT 254: PRINCIPLES OF ACTING I — 3 s.h.  
1st semester, annually

Principles and techniques of movement, stage direction, pantomimic dramatization, characterization development, and interpretation through improvisations and playing roles in scenes from contemporary dramas. Prerequisite: Voice and Diction or consent of the Instructor.

SCT. 255: STAGECRAFT AND LIGHTING —  
1st semester, annually 3 s.h.

Study and practice in scene construction, scene painting, theatre equipment, the basic technical elements of stage electricity, and instrumentation operation and selection.

SCT 256: ARGUMENTATION AND DEBATE —  
1st semester, annually 3 s.h.

Principles of reasoned discourse and their application to controversial issues.

SCT 257: ADVANCED DEBATE —  
2nd semester, even numbered years 2 s.h.

Further experience in competitive debating and in a variety of debating forms is provided. Prerequisite: Consent of instructor.

SCT 258: USE OF VIDEOTAPE IN EDUCATIONAL  
DEBATE — upon student demand 2 s.h.

Utilization of the videotape technique to improve the debating skills of the student. Applications of videotaping to debating, including exchange debates with other colleges and possibly international exchanges. Use of videotape as a technique for teaching debate. Consideration of experimental possibilities of the videotape process. Prerequisite: SCT 256, or consent of instructor.

SCT 264: DISCUSSION — 2nd semester, annually 2 s.h.

Designed to develop the attitudes, skills, and knowledge of methods favorable to effective participation and leadership in discussion by conferences, committees, and other small groups.

SCT 300: COMMUNICATION IN ORGANIZATIONS —  
2nd semester, annually 3 s.h.

This course is designed to give insight into traditional and modern concepts of channels of communication in simple and complex organiza-



tions with emphasis on informal and formal group dynamics, interpersonal relationships, leadership, communication theory, and creativity. Considerable attention is given to interviewing.

**SCT 311: PERSUASION —**  
2nd semester, odd numbered years 3 s.h.

Study and practice in persuasive speaking. General theories of persuasion, the role of persuasion in a democratic society, and an introduction to modern experimental research in the area included.

**SCT 312: GENERAL SEMANTICS —**  
1st semester, annually 3 s.h.

An investigation of the relationship between words and the realities they represent. Special emphasis will be given to an understanding of personal, political, and international problems that arise due to semantic breakdowns in the communication process. Students concentrating in Public Address may substitute this course for SCT 311, 411, 412, 490, or 491.

**SCT 350: SUMMER DRAMA WORKSHOP —**  
summer, annually 6 s.h.

The summer drama workshop combines study and practice in the dramatic arts and includes formal, intensive study in acting, play production, direction, makeup, scene design, stage lighting, and stagecraft. In conjunction with the workshop, Clarion State College sponsors a Summer Theatre Company consisting of members of the workshop and produces five major productions.

**SCT 351: ADVANCED THEATER PRODUCTION —**  
summer, annually 6 s.h.

Advanced study and practice in the dramatic arts, including projects in scene design, theater management and acting. Students will work with members of the Summer Drama Workshop in the production of five major plays for the Clarion Summer Theater. Prerequisites: SCT 120 or 350.

**SCT 352: PLAY DIRECTING —** 1st semester, annually 3 s.h.

A study of the fundamentals and procedures of play directing and problems faced in educational theater, including analysis of the script, methods of casting, and rehearsal. Students direct one-act plays for public presentation.

**SCT 354: ORAL INTERPRETATION —**  
each semester 3 s.h.

The course emphasizes the understanding and appreciation of literature through developing skill in reading aloud. Help is given in selecting, adapting, and preparing literature for presentation. Special attention is given to reading materials required of the classroom teacher. Prerequisite: SCT 251 or consent of the Instructor.

**SCT 358: PSYCHOLOGY OF SPEECH —**  
2nd semester, annually 3 s.h.

This course is a study of the several theories of speech origin; it also concentrates on the development of language acquisition; speech is further

studied as an aspect of personality; and certain speaker-audience phenomena are investigated.

SCT 359: HISTORY OF THE THEATER —  
2nd semester, annually 3 s.h.

History of plays and playwrights from the fifth century B.C. to the present.

SCT. 361: PRINCIPLES OF ACTING II —  
2nd semester, annually 3 s.h.

A study of period styles of acting, speech, and movement which include the Classic Shakespearean, Commedia, Restoration, Romantic, and Early American Periods.

SCT 362: PRINCIPLES OF STAGE DESIGN —  
2nd semester, annually 3 s.h.

Study and practice in the aesthetics, methods, and techniques of setting and lighting design for the theater. Covers both period and contemporary analysis.

SCT 363: THEATRICAL COSTUME AND MAKE-UP —  
1st semester, annually 3 s.h.

A historical survey of costume and fundamentals and application of stage make-up.

SCT 364: SCENE PAINTING FOR STAGE —  
1st semester, odd numbered years 3 s.h.

Studio instruction in the use of brushwork and pigment to develop landscape, ornament, panelling, and architectural detail in stage scenery based on the analysis of form and source of light.

SCT 411: CLASSICAL RHETORIC —  
upon student demand 3 s.h.

Study of the rhetorical theories of the ancient Greeks and Romans and their historical context. Includes the work of Plato, Aristotle, Cicero, Quintilian, and St. Augustine. For juniors and seniors.

SCT 412: BRITISH PUBLIC ADDRESS —  
upon student demand 3 s.h.

Study of the rise of public speaking in Great Britain and its influence on the course of history in that democracy, both in and out of Parliament. Includes the study of the speaking of Lord Chatham, Burke, Fox, Pitt, Sheridan, Gladstone, Disraeli, and Churchill. For juniors and seniors.

SCT 453: APPLIED PHONETICS —  
upon student demand 3 s.h.

An analysis of the speech sound used in English so that the student develops auditory acuity and correct reproduction of sounds; transcripts of spoken material using I.P.A. and diacritical marking.

SCT/COMM. 454: RADIO AND TELEVISION —  
1st semester, annually 3 s.h.

An introduction to the broadcasting industry including stations, networks, the Federal Communications Commission, advertisers and

agencies, the public, and the impact of broadcasting as an entertainment, informational, and educational medium. A foundation course for communications study and the development of knowledgeable consumers of the broadcast media.

**SCT 455: CREATIVE DRAMATICS FOR ELEMENTARY TEACHERS** — 2nd semester, annually 3 s.h.

A study of the techniques and theory of playmaking. Study of dramatic activities for children including story telling, story dramatization, rhythms, and pantomime. Designed for the elementary teacher.

**SCT 458: PLAYWRITING** — 2nd semester, even numbered years 3 s.h.

Principles of play construction. Analysis of historical and contemporary dramas. Preparation of original scripts. Designed to meet the interests and abilities of individual students.

**SCT 465: ADVANCED ORAL INTERPRETATION** — 2nd semester, odd numbered years 3 s.h.

Inquiry into the advanced techniques of the oral interpretation of prose, poetry, and drama. Emphasis upon literary analysis and style.

**SCT 490: INDEPENDENT STUDY** — each semester 1-3 s.h.

Selected topics for research and/or performance projects in Speech Communication and Theater. Prior to registration students need to obtain an advisor who will direct their study.

**SCT 491: INDEPENDENT STUDY** — each semester 1-3 s.h.  
Same as SCT 490.

## **SPEECH PATHOLOGY AND AUDIOLOGY**

**SPA 450: SPEECH SCIENCE I** 3 s.h.

Introduction to the science of speech sounds, with emphasis on the production and transmission of speech. Transcription of normal and deviant speech using the International Phonetic Alphabet. Application of phonetics and phonemics to speech correction.

**SPA 451: ANATOMY OF SPEECH AND HEARING MECHANISMS** 3 s.h.

Study of the anatomy and physiology of the speech and hearing mechanisms.

**SPA 452: SPEECH PATHOLOGY I** 3 s.h.

This course is an introduction to the profession of Speech Pathology emphasizing the description, diagnosis and treatment of language, articulation, and stuttering disorders.

**SPA 453: SPEECH PATHOLOGY II** 3 s.h.

This course emphasizes the description, diagnosis, and treatment of aphasia, cleft palate, cerebral palsy, and voice.

- SPA 454: CURRICULUM MATERIALS FOR SPEECH CORRECTION 3 s.h.  
Teaching techniques, source materials, visual aids, and special techniques to be employed in speech practice and correction are studied.
- SPA 455: SPEECH CORRECTION FOR THE CLASSROOM TEACHER 3 s.h.  
Designed to acquaint students with speech problems common to children on the elementary level. Emphasis is placed on the study of materials, methods, and techniques used by the classroom teacher in improving the speech of all children.
- SPA 456: SPEECH SCIENCE II 3 s.h.  
The major acoustical, electrical, and physiological parameters associated with instruments in speech and hearing are studied.
- SPA 457: DEVELOPMENT SEQUENCES IN LANGUAGE AND SPEECH 3 s.h.  
This course is a study of the development of language and speech in the normal child. Normative data in speech and language development are studied.
- SPA 460: HEARING PROBLEMS 3 s.h.  
The nature of hearing disorders and the medical, social, psychological, and educational implications are investigated.
- SPA 463: SPEECH READING AND AUDITORY TRAINING 3 s.h.  
A comprehensive study of auditory rehabilitation with emphasis upon auditory training, speech reading, and speech retraining. Prerequisite: SPA 460.
- SPA 464: AUDIOLOGY 3 s.h.  
A continuation of SPA 460: Hearing Problems. Prerequisite: SPA 460.
- SPA 468: SPEECH AND HEARING CLINIC I: PRACTICUM 3 s.h.  
Supervised clinical observation and practice in case study and conferences, diagnostic evaluations, remedial procedures, parent conferences, and reporting. The application of theory in the development of clinical skills with individuals and small groups of children and adults, for a minimum of 135 clock hours. Prerequisites: SPA 452, 460.
- SPA 469: SPEECH AND HEARING CLINIC II: ADVANCED PRACTICUM 3 s.h.  
A continuation of SPA 468.
- SPA 472: SEMINAR IN SPEECH SCIENCE 3 s.h.  
This course begins with a review of the speech mechanism as a servosystem and transducer, and basic knowledge of the physics of sound. The remainder of the course focuses attention and is structured on the concept that the speech mechanism is a chain of events physiologically, acoustically, and perceptually. Each link in this chain of events is studied

in terms of basic knowledge, pertinent research, and each link's contribution to the speech chain as a whole. Prerequisite: SPA 456 or a basic course in phonetics and/or speech science. Offered every fall.

SPA 422:       STUDENT TEACHING WITH THE SPEECH  
                  AND HEARING HANDICAPPED                   6 or 12 s.h.  
Observation of and participation in school and clinic environments.

## ENROLLMENT AT CLARION STATE COLLEGE

Student enrollment has risen from 825 in September, 1959, to over 4,700 in September, 1974, making Clarion one of the fastest growing colleges in Pennsylvania. The present enrollment is almost equally divided between men and women and is drawn from the sixty-seven counties of the Commonwealth. Each year the number of students from states other than Pennsylvania increases and there is a small but encouraging representation from foreign countries.

An analysis of the enrollment in September, 1974, showed the following counties contributing substantial numbers of students to Clarion.

|            |      |                |     |
|------------|------|----------------|-----|
| Adams      | 15   | Huntingdon     | 8   |
| Allegheny  | 1116 | Indiana        | 37  |
| Armstrong  | 123  | Jefferson      | 136 |
| Beaver     | 160  | Lackawanna     | 6   |
| Blair      | 25   | Lancaster      | 22  |
| Bradford   | 17   | Lawrence       | 84  |
| Bucks      | 37   | Lebanon        | 23  |
| Butler     | 129  | Lehigh         | 25  |
| Cambria    | 77   | Luzerne        | 9   |
| Cameron    | 14   | Lycoming       | 22  |
| Centre     | 7    | McKean         | 77  |
| Chester    | 34   | Mercer         | 160 |
| Clarion    | 472  | Mifflin        | 22  |
| Clearfield | 122  | Montgomery     | 43  |
| Clinton    | 13   | Northampton    | 13  |
| Crawford   | 76   | Northumberland | 21  |
| Cumberland | 30   | Philadelphia   | 38  |
| Dauphin    | 57   | Somerset       | 19  |
| Delaware   | 24   | Union          | 11  |
| Elk        | 43   | Venango        | 381 |
| Erie       | 141  | Warren         | 49  |
| Fayette    | 26   | Washington     | 96  |
| Forest     | 20   | Westmoreland   | 337 |
| Franklin   | 11   | York           | 19  |
| Greene     | 8    |                |     |

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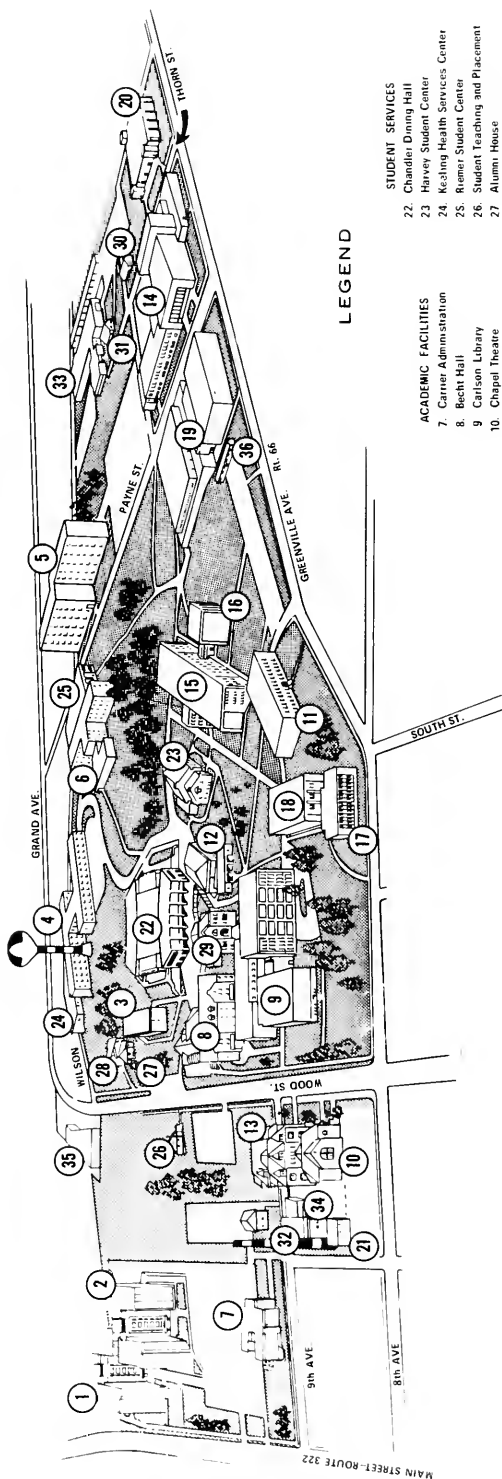
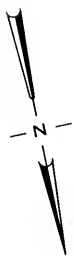
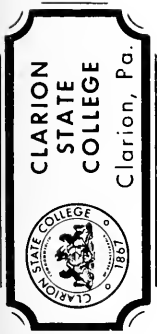


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# LEGEND

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|-------------------------------------|------------------------------------|----------------------------------|
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| 7. Career Administration            | 22. Chandler Dining Hall           | 29. Music Hall                   |
| 8. Becht Hall                       | 23. Harvey Student Center          | 30. Horn I                       |
| 9. Carlson Library                  | 24. Health Services Center         | 31. Horn II                      |
| 10. Chapel Theatre                  | 25. Remer Student Center           | 32. Laundry                      |
| 11. Davis Hall                      | 26. Student Teaching and Placement | 33. McIntire Maintenance         |
| 12. Egbert Hall                     | 27. Alumni House                   | 34. Power Plant                  |
| 13. Founders Hall                   | 28. Wood Street House              | 35. Receiving and Central Stores |
| 14. Marwick Boyd Fine Arts Center   |                                    | 36. G.S.A. Office                |
| 15. Peirce Science Center           |                                    |                                  |
| 16. Planetarium                     |                                    |                                  |
| 17. Special Education Annex         |                                    |                                  |
| 18. Stevens Hall                    |                                    |                                  |
| 19. Tupper Gymnasium & Natatorium   |                                    |                                  |
| 20. Becker Research Learning Center |                                    |                                  |
| 21. Foundry                         |                                    |                                  |

